U.S. Department of Transportation
Federal Aviation Administration

Memorandum

ubject: ACTION: NAS Training Plan

Date: JUN 23 1988

From: Acting Manager, Technical Training Division, APT-300

Reply to Attn. of:

To: Distribution

This transmits the June '88 update of the NAS Training Plan. This issue has been updated to reflect improvements in the Training Data Base Sheets and the Subsystem Training Plans.

We trust you will find this document a useful tool to aid you in your training planning. If you have further suggestions for improving the NAS Training Plan, please forward your comments to APT-300's principal in this matter, Tom Buschbaum, FTS 267-8030.

Marlene F. Hardesty

John R. Garrett

National Airspace System
Training Plan

June 1988

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

Initiated By: APT-300

FOREWORD

The National Airspace Training Plan issued December 1987 is superseded by this issue. It has been updated to reflect recent changes to the process developed to support NAS Plan training requirements.

The NAS Training Plan enumerates requirements and task descriptions governing the implementation of a Training Program for National Airspace System (NAS) projects. This issue includes several initiatives suggested by the Regional user community. The Plan will continue to be responsive to users' desires.

The goal of this Plan is to develop a single, uniform approach for conducting those activities necessary to (1) ensure training requirements are an integral part of new systems procurement, (2) define the requirements for initial training, (3) define methods to expand use of training products throughout the FAA training community, and (4) prepare the attendant data products.

This Plan identifies specific requirements and tasks as well as roles and responsibilities, which, when performed in an iterative and timely manner, constitute the training program for the NAS. This Plan is applicable to all NAS Training Programs.

All suggestions on ways in which this Plan can be made more useful to its users are welcome. Please feel free to forward your comments directly to me.

John R. Garrett
Acting Manager, Technical Training
Division, APT-300

CHANGE RECORD

Please remove the pages listed below from your NAS Training Plan, and use the attached change pages as replacements. Retain this page as a record of additions, deletions, or revisions to your copy of the Plan.

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INTRODUCTION

The Federal Aviation Administration (FAA) will integrate into the National Airspace System (NAS) all of the new equipment addressed in the NAS Plan for Facilities, Equipment, and Associated Development. In the training area, the goal is to ensure that FAA personnel receive training in time to test, install, operate and maintain the equipment as it is delivered. Achieving this goal will require the dedication and cooperation of all training personnel throughout the FAA as well as support from the System Engineering and Integration Contractor (SEIC).

To ensure that all NAS training is implemented efficiently and effectively, the FAA has set two major goals. The first is to develop NAS training plans that will provide efficient use of training resources with minimal impact to ongoing FAA training. The second is to ensure that training procedures and training management functions facilitate the incorporation of NAS requirements into FAA policy. These two goals are both complementary and critical. The FAA is faced with an enormous management challenge to implement the NAS Plan. Over 100 new subsystems must be procured, tested, and integrated into an existing system that is being consolidated and restructured. In this unprecedented step toward modernization, management of training resources--people, time, and facilities--must be coordinated in detail if the NAS Plan is to be successful. In effect, the NAS Plan not only provides for modernization of the equipment and facilities but also provides the impetus to streamline and improve every aspect of the training system from acquisition to evaluation.

1. GENERAL

a. PURPOSE. FAA Order 1800.58 establishes National Airspace Integrated Logistics Support (NAILS) policy. Training is an element of NAILS. The NAILS Master Plan (SM-88-005), which is part of FAA Order 1800.58, establishes the NAS Training Plan as the means to implement NAS Plan subsystem training requirements. The NAS Training Plan establishes a single reference point for activities and documentation related to training in support of the NAS Plan. It is intended to provide training personnel with planning information for Air Traffic and Airway Facilities technical training. Appendix D provides extremely detailed training planning information in the form of Subsystem Training Plans (STPs) for NAS Plan projects.

The NAS Plan identifies two major goals for the effective implementation of training. #1 - To ensure the efficient use of training resources with minimal impact to ongoing FAA training. And, #2 - To ensure that training procedures and management functions conform to FAA policy.

This document also serves as a user's guide to explain how to use the STPs and the Training Data Base (TDB) most effectively.

b. SCOPE. The NAS Training Plan shall include, but is not limited, to the following requirements:

(1) Identify requirements for both Airway Facilities and Air Traffic training.

(2) Support a training program to facilitate the transition to new NAS hardware and software.

(3) Support a training program that provides for the progressive improvement and consistent maintenance of the knowledge and skill levels of all NAS personnel.

(4) Support a training program, including facilities, equipment, methods and materials, to support basic knowledge, skills and the operation and maintenance of new systems, subsystems, equipment, and computer software.

This plan is designed to be used in conjunction with, and complementary to, all NAS Plan documents which have a training content. This plan establishes the foundation of NAS Plan training planning activities; the data contained herein provides the basis upon which all other NAS Plan documents' training content is referenced.

c. DEFINITIONS AND ACRONYMS:

(1) Training Information Process (TIP). The TIP has been developed in response to the substantial increase in training requirements resulting from implementation of the NAS Plan. The NAS Training Plan provides information on the TIP functions and details methods of utilizing TIP data by FAA offices and staff. It explains how various FAA agencies can access and utilize the tremendous amount of training information available in the TIP database. The TIP provides information on FAA training resources and is intended for use

by FAA organizations which procure, design, implement, and receive training. The TIP enables training organizations to receive current training data and plan for the optimum application of resources. The TIP includes detailed data on numbers of people to be trained, training sites, equipment delivery sites, class schedules, course objectives, training program analyses and other pertinent data. The components and functions of the TIP are presented in Chapter 3. Chapter 4 provides specific information on how to use the TIP.

A Training Proposal (TP) is required for each system associated with the NAS Plan for AF and AT training in accordance with FAA Order 3000.6B. STPs are prepared by the SEIC, and Integrated Logistics Support Management Team meetings are also means to identify training when a TP is absent. The STPs (Appendix D) contain the training requirements as established by the training proposals and provide the necessary detail to establish training requirements for both Airway Facilities and Air Traffic.

(2) NAILS Master Plan. The NAILS Master Plan (SM-88-005) provides the guidelines and requirements for implementing a NAILS program during the life cycle of NAS equipment. An integral part of the NAILS Plan is the identification of eight logistics elements which comprise a NAILS program.

One of the key elements in an integrated logistics program is "training and training support." The NAILS Master Plan is designed to identify the requirement for "training and training support" and to explain how this requirement is to be integrated into the NAILS process. While the NAILS Master Plan identifies the requirement for "training and training support," the vehicle which imposes this requirement is the NAS Training Plan.

The NAS Training Plan provides the details and requirements for transition and site specific training for the NAS projects. The project Integrated Logistics Support Plans (ILSPs) detail all of the NAILS elements for a project and will specifically identify the level to which the NAILS elements apply to the particular project. As is explained in the following paragraph, the STP is the source for project-specific training and class scheduling data.

(3) Project Integrated Logistics Support Plan(s) (ILSP). Each NAS project will have an individual ILSP which describes the FAA approach to logistics support for the project. Included in the ILSP will be the maintenance concept for the project as well as a description of how the FAA envisions meeting the support requirements imposed by the elements of logistics support, to include training. The ILSP will only describe in general terms the plan for training support. Specifics of the training planning are contained in the STP for the specified project. The project ILSP also describes and defines the role of the NAILS Management Team which includes representatives of the FAA, SEIC, and contractors who are responsible for planning and executing the logistics support for the project. A training representative from the FAA will be a member of this team.

(4) NAILS Integrated Support Plan(s) (ISPs). When required by the contract, an ISP will be developed by the prime contractor for the project, describing how the contractor intends to execute logistics support for the project, including training, within the guidelines established in the FAA project ILSP. The results of the contractor analysis and planning will be included in the STP for the project.

(5) NAS Project Implementation Plan(s) (PIPs). Regional headquarters are producing NAS Project Implementation Plans which include training data for individual NAS programs. Feedback from the regions indicates that system descriptions, prerequisites and maintenance concept information are the most likely areas of the STP for inclusion in Regional PIPs. The detailed level of training information that is not resident in the PIPs can be found in the STPs which are appendices to the NAS Training Plan.

(6) NAS Transition Plan. The NAS Transition Plan presents the strategy for transforming today's NAS and its facilities, equipment, and personnel from the present configuration to that described in the NAS Allocated Design document. The transition concept is subdivided into three categories: 1) National level transition role; 2) Regional transition; and 3) Facility transition. This paragraph discusses the National transition role. Paragraphs C(7) and C(8) discuss the Regional and Facility Transition Plans, respectively.

The development, procurement, acceptance, integration and tests of the NAS subsystems are accomplished at the national level. The specific transition design activities include the development of: 1) NAS Transition Plan; 2) Master Schedules and Networks; 3) Project Implementation Plans; 4) Management of Interim Interfaces; 5) Development of Performance Requirements; and 6) Development of Standard Installation Designs. In addition, model Regional and Facility Transition Plans will be developed on a national level to promote uniformity of the Regionally prepared plans.

The NAS Training Plan, via the STPs, the TDB, and summaries provides the necessary information to assure that adequate training is planned at the national level.

(7) Regional Transition Plans. The Regional Transition Plans present the strategy to accomplish transition of the facilities and the systems within specific regional boundaries. Each region will develop a Regional Transition Plan, using the Regional Transition Plan Guidelines developed at the national level for format, content, and procedures. The Regional Transition Plan covers several areas: 1) Regional Transition implementation concept; 2) Scheduling and allocation of new NAS subsystems; 3) Identification of subordinate organizations' responsibilities; and 4) Project-specific plans and drawings for new NAS subsystem regional installations.

Regional implementation plans are currently being prepared at the regional office for applicable near-term NAS projects. These implementation plans are derived from and conform to the national project implementation plans. These implementation plans also reflect the regional schedules distilled from the NAS Transition Plan and national project implementation plan schedules. Regional offices will adapt the nationally developed facility transition plan guidelines to reflect delivery schedules, quantities, and installation requirements for each facility. The NAS Training Plan provides the necessary information to assure that adequate training is planned at the regional level by providing STPs, class summaries, training analyses, and training requirements.

(8) Facility Transition Plan(s). The Facility Transition Plan reflects the delivery schedules, quantities, and specific installation requirements of each facility. The Air Route Traffic Control Center/Area Control Facility (ARTCC/ACF) will be the focal facility for implementing the transition plans developed by the regional office. Transition must be keyed on the optimal ARTCC/ACF facility because: 1) The ARTCC/ACF is the central controlling point for air traffic planning and control within a defined airspace and geographic area; 2) the ARTCC/ACF is the central point for communications, surveillance, data processing, storage, and distribution; and 3) the ARTCC/ACF is the major center for communications system network management, control, and remote maintenance monitoring system. Transition planning for the facility will include a detailed description of the current connectivity configuration of each facility. A set of facility configurations will be developed to provide regional personnel, project managers, contractors, and transition managers with appropriate planning and management information.

The NAS Training Plan assures that adequate training is planned by the Region by providing detailed training information via the STPs (course content, program analysis, class schedules and delivery schedules).

(9) The Mike Monroney Aeronautical Center (MMAC) Transition Plan. This plan differs from other facility transition plans because the MMAC is considered a nonstandard facility, meaning that it is unique in its function and operation within the FAA. In order to accommodate the unique characteristics of this facility, the MMAC Transition Plan will address the following areas: The overall management and administrative functions associated with the MMAC; the Depot functional organizations; the FAA Academy functional organizations; and all project network interfaces as they apply to each functional organization.

The MMAC Transition Plan will provide for an orderly transition of the MMAC, by functional entity, from the present operation to the revised operations of 1995 as described in the NAILS master plan. The current MMAC Transition Plan is designed to cover a 3-year period (FY 88/89/90) with a yearly rolling update through 1995 to reflect changes at the national level or to specifically define those areas previously listed as TBD. Each section of the MMAC Transition Plan (i.e., Administrative Systems; Depot; and Academy) will specify present, transitional, and final configuration requirements in the following categories: management responsibilities; operations; space/facility requirements; equipment requirements; personnel requirements; training requirements; human resources programs; budget procedures; policies/procedures; planning/schedules/network interface; and document control update.

The NAS Training Plan via the TIP provides detailed information and methods to ensure efficient and effective training planning with minimal impact to present operations while implementing the MMAC Transition Plan.

(10) National Airspace System Plan, Facilities, Equipment and Associated Development (Brown Book). The NAS Plan presents a comprehensive approach to modernize and improve Air Traffic Control and Airway Facilities services from now to the year 2000.

Every project in the NAS Plan which has a training requirement associated with it, is detailed in this NAS Training Plan. As the NAS Plan expands and new programs are added, any additional training requirements which result from those additions will be documented in the NAS Training Plan. The NAS Plan provides the reader with a "broad brush" overview of the FAA expansion and modernization; the NAS Training Plan provides the necessary level of detail to validate and plan training requirements.

(11) Transition Training. The NAS Training Plan will address NAS systems life-cycle training and transition training in accordance with FAA Orders 6000.30(AF) and 3120.4(AT).

The present AF full performance level (FPL) employee has been trained, and has become proficient on equipment and technologies which have become dated. Equipment which is presently in the agency inventory includes vacuum tube and discrete transistor circuitry and some small to medium scale integrated circuits. The equipment being procured includes microprocessor controlled devices, very large scale integrated circuits, optical technology, and other sophisticated elements. The present workforce will find that much of their basic theoretical training still applies, while some has become obsolete, and that, in other areas, no previous training will have prepared them for current developments. In addition to new hardware elements, the present staff has minimal experience with software implementation, software maintenance, automated diagnostics procedures, and remote maintenance operations.

By analysis of the knowledge and skills required to operate, use, and maintain the equipment of the planned NAS, and comparison to those basic theories presently being taught, a list of transition items can be established. The product of this comparison would be a series of course objectives and would serve as the basis for one or more training proposals to develop a training program to meet those needs which were identified.

The benefits of this approach would be realized in the shortening of those new equipment courses presently scheduled or projected, by the removal of those course objectives which had been covered in the transition theory course(s).

As the workforce begins to leave the FAA system due to promotion, transfer, retirement, or any other form of attrition, they will be replaced by new personnel who will require a complete coordinated training program to bring them from entry level to FPL status. By the time this training need is felt, most if not all the components of their training program will exist. Combining these elements will require evaluating the existing basic entry level courses, to remove obsolete material, and integrating them with the new transition courses to provide a solid theoretical background. With this preparation, students should be adequately prepared to enter training courses on the new systems, following the same training paths as the transition workforce.

The methodology for processing the data necessary to produce proposals for development of such a total training program is under study and will be included in a future update of this document.

(12) Refresher/Proficiency Training. Previous generations of equipment employed analog technology based upon vacuum tube and transistor devices. Daily maintenance procedures required the maintenance technician to measure operating parameters and make adjustments on a regular basis. This provided the workforce with a constant proficiency training environment. As the equipment evolved towards the present digital technology, reliability has increased, routine maintenance needs have decreased, and the mean time between failures has risen dramatically. Without the constant reinforcement of a rigorous daily maintenance schedule, it has become difficult to attain, or maintain, the high level of proficiency in equipment operation which has characterized our workforce. The result of this condition is an undesirable increase in the mean time to restore, which contributes to a lessening of site availability.

To compensate for the reduction in equipment hands-on time, a training program must be established which will allow field personnel to receive regular reinforcement of system operation and malfunction isolation.

Review of the Job Task Analysis (JTA) for the equipment will allow a list to be compiled which would indicate those tasks which would require proficiency training. Field experience and maintenance records would provide insight to items which should be added to or removed from this list. Some areas which seem appropriate for refresher training include: system diagnostic routines, operating parameters, system configuration procedures, specialized test equipment/procedures, and data message formats. The requirement for this training emerges at about the time a new system has had time to "settle down," approximately three years into its life cycle, on the average.

Air Traffic Control Specialists require training on the operation of new equipment under conditions similar to those encountered in day-to-day operations. This training should be of sufficient intensity to ensure mastery of equipment functions/operation under moderate to heavy air traffic workload conditions.

Proficiency training areas that appear appropriate for Air Traffic Control Specialists include: procedural changes, rule and regulation changes or additions, equipment modification, software enhancements that alter or produce a change in data presented, and operational notices. Refresher training is necessary to upgrade and maintain FPL controller skills.

The NAS Training Plan will address refresher/proficiency training at a future date.

(13) Training Working Group (TWG). The TWG serves a "staff" function within the National Airspace Integrated Logistics Support (NAILS) Program. The TWG supports the Training Oversight Committee (TOC). The TOC is the approval body for all TWG products and recommendations and is the training arm of the NAILS Steering Committee. The NAILS Steering Committee is charged with overseeing the development and implementation of the NAILS policy.

d. FAA REFERENCES:

(1) National Airspace Logistics Support Policy, FAA Order 1800.58. FAA Order 1800.58 establishes FAA policy for the logistics support for

subsystem acquisitions, major modifications, and applicable research and development projects in the NAS.

(2) National Airspace Integrated Logistics Support Master Plan, SM-88-005. The NAILS Master Plan is designed to identify NAILS requirements and explain how project NAILS programs are incorporated into the overall NAS structure. The policies outlined in the NAILS Master Plan are applied to each project by the project Integrated Logistics Support Plan (ILSP). The NAILS Master Plan identifies Training and Training Support as an element of NAILS and establishes the NAS Training Plan as the vehicle for meeting the requirements of NAILS in training matters.

(3) Training, FAA Order 3000.6B. Training Order 3000.6B establishes FAA training policy, procedures, and program standards. Order 3000.6B also assigns responsibility for training and training evaluation for both FAA and non-FAA personnel. It specifically details the management and development process for FAA Training Plans/Proposals (including National Plans).

(4) Airway Facilities Maintenance Technical Training Program, FAA Order 3000.10A. Training Order 3000.10A provides supplementary policy and procedures and delineates the responsibilities for the planning, administration, and conduct of Airway Facilities technical training programs. Order 3000.10A also provides guidelines for the selection and assessment of AF training requirements, programs, and program materials.

(5) FAA Academy/Training, FAA Order 3000.18C. Training Order 3000.18C establishes training policies and procedures and explains the responsibilities of FAA Academy personnel in implementing Agency Training Orders. Order 3000.18C also provides guidelines for the analysis, design, development, implementation, and control of FAA Academy produced or reviewed training programs and program materials.

(6) Air Traffic Training Order 3120.4G. Training Order 3120.4G conveys instructions, standards, and guidance for Air Traffic managers who plan, conduct, and administer training for Air Traffic personnel.

(7) NAS Level I Design Document, NAS DD-1000, Rev A. This document develops a NAS architecture that is responsive to the needs of the NAS community and provides an overall description of facilities, equipment and their interrelationships. It allocates functions to subsystems based upon operational requirements and identifies functional interfaces including flows and connectivities. It includes the requirement for training support of NAS projects; the NAS Training Plan supports that position.

(8) NAS System Specification NAS SS-100000, Vols I-IV, Functional and Performance Requirements for the NAS Air Traffic Control Element. This document quantifies system and subsystem level performance requirements based upon operational requirements, and determines quantities and location of equipment for each subsystem. Subsystem performance requirements and interface requirements are provided. The NAS Allocated Design specifies FAA-STD-028, Contract Training Programs, and the NAS Training Plan as the documents responsible for identifying NAS Plan training requirements.

2. NATIONAL AIRSPACE INTEGRATED LOGISTICS SUPPORT (NAILS) TRAINING WORKING GROUP (TWG)

The NAILS TWG was established to ensure that the NAS training program is responsive to the training requirements resulting from the installation of new equipment. The goal of the NAILS TWG is to produce a totally integrated and responsive training system. To accomplish this goal, the TWG will consider every aspect of training planning, acquisition, development, implementation and evaluation.

a. TWG CHARTER. The NAILS TWG was chartered in February, 1985. The TWG consists of permanent members and supporting participants. The TWG meets periodically to review training related issues impacting the National Airspace System (NAS). Issues of concern for TWG review are approved by the Training Oversight Committee (TOC). In addition, all TWG products, activities and recommendations are subject to the review and approval of the TOC. The activities and recommendations of the TWG are documented in formal minutes. Action items and response dates are assigned to each issue for tracking purposes.

b. ORGANIZATIONAL ROLES AND RESPONSIBILITIES. Since several FAA offices are involved in planning NAS training, it is essential to clarify each office's responsibilities, as well as its interaction with other offices within the overall structure. Once clarification is achieved, goals can be set, responsibilities outlined and understood, and results achieved.

With this in mind the organizational roles and responsibilities of all offices involved in training procurement for NAS Plan subsystems are laid out as shown in Figure 2-1, "FAA Technical Training Management Structure." It is a diagram of how all offices interact to provide the necessary Air Traffic and Airway Facilities training; it serves as a quick reference which summarizes the responsibilities called out in the following documents:

- Air Traffic Training, FAA Order 3120.4G
- Contract Training Programs, FAA-STD-028
- FAA Catalog of Training Courses
- Training, FAA Order 3000.6B
- Airway Facilities Technical Training Program, FAA Order 3000.10A
- FAA Academy Training, FAA Order 3000.18C
- Preparation of Procurement Requests, FAA Order 4400.42
- National Airspace Logistics Support (NAILS) Policy, FAA Order 1800.58
- National Airspace Logistics Support (NAILS) Master Plan (SM-88-005)

The TWG and TOC are involved in every aspect shown on the diagram with the common goal of optimizing the process. An explanation of the process/ structure follows. Figure 2-1 contains an overview of the organizations involved in initiating training requirements.

There are two general groupings of operations/maintenance training requirements that Figure 2-1 takes into consideration. They are "Attrition" and "New System" requirements.

(1) Attrition Training. In the figure, the box marked "Field Sites" is the entry point for attrition training. Sites establish their requirements for this training and are the ultimate recipients of all training. The requirements are compiled at the Sectors, then again at the Regional level. Training requirements are forwarded by the AXX-17 Training Branches at the Regional offices to FAA Headquarters. Regional Human Resource Development Officers (HRDOs) prioritize requirements, since they have timely insight into restrictions that may affect schedules. At FAA headquarters, AAT-14 reviews AT requirements and assembles them for APT-300 consideration. ASM-210 performs a similar function for AF requirements. Then APT-300 conducts the training programming conferences with the FAA Academy, ASM, and AAT, and establishes the program objectives. Based upon the program objectives, quota is assigned to the regions.

(2) New Systems Training. In the realm of training in support of new systems, the loop is a bit different. Again, AAT-14 deals with the AT requirements and ASM-210, the AF requirements. Based upon their review of a new system's specifications, each office produces a training proposal which is forwarded to APT-300. They also forward Training Advisories to Regional offices. APT-300 reviews the proposals and produces a Training Procurement Request (PR); a portion of this process involves coordination and feedback dialogue with the Program Management Office for whose systems the PR is prepared. This PR is provided for action to ALG-300. This office tailors the information for insertion into the Requests for Proposal (RFPs) which go out to industry for bidding on new system contracts. When a contract is awarded, the contractor supplies the training deliverables to the FAA Academy as called out in the contract. A Training Contract Officer's Technical Representative (COTR) is assigned at the Academy to facilitate review and evaluation of the contractual items. This COTR also maintains a feedback loop with ALG-300 to address and resolve any issues which may arise as training development progresses. The contractor, guided by the Data Item Descriptions (DIDs) and philosophy contained in FAA-STD-028, "Contract Training Programs", develops the courses and training materials, then conducts classes for Academy and Site personnel. This meets requirements for all or part of the initial cadre training in support of new systems. The Academy personnel take the contractor's courses and make them a part of the Academy curricula, which then fulfills attrition training requirements for the life cycle of the systems.

APT-300 at FAA Headquarters is the focal point for all training requirements. This office assembles them and provides the Academy with a composite of all training requirements in sufficient time for the Academy to plan class schedules. APT-300 takes necessary action to procure any training which is not available from the Academy.

FAA Technical Training Management Structure

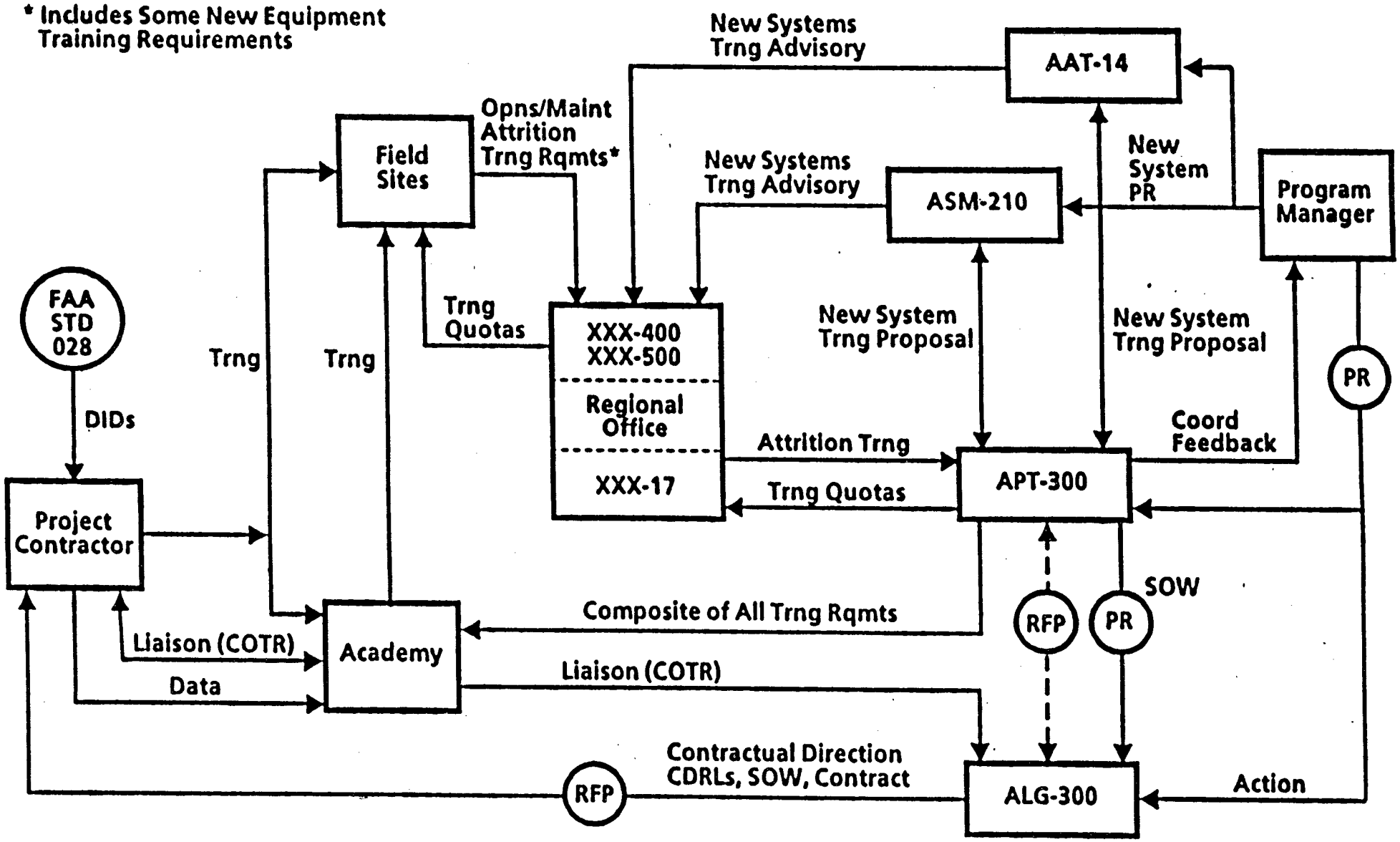

Figure 2-1 FAA Technical Training Management Structure

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3. TRAINING INFORMATION PROCESS (TIP)

The TIP is designed to provide training information about NAS Plan projects. An overview of the process is shown in Figure 3-1, "NAS Training Information Process (TIP)." The TIP consists of two major components: Subsystem Training Plans (STP) and the Training Data Base (TDB). The TDB schedules are provided FOR PLANNING PURPOSES ONLY and should not be construed to constitute actual class assignments. The Consolidated Personnel Management Information System (CPMIS) continues to provide all current Fiscal Year class information. STPs provide detailed training information for each plan project which has AF and/or AT training requirements. The schedules for each subsystem are developed using software programs, which allow for input into the Training Data Base. The TDB supports the production of reports for various organizations in FAA training which are used for planning and feedback purposes. STPs and the TDB are discussed in the remainder of this chapter. Specific uses of the TIP and its components are discussed in Chapter 4.

An essential element of the TIP is the feedback loop. This loop provides the means by which regional organizations can channel back to HQ a user's perspective of the data being made available via the TIP. The training specialists who are responsible for developing the data can then utilize the feedback to enhance their respective program data, and/or work with FAA HQ offices to resolve issues in their programs.

To properly exploit the feedback loop, the field must channel the information through regional AT and AF Training Divisions to the SEIC training representative, who will then insure that the information is delivered to the proper HQ training specialist for action.

a. SUBSYSTEM TRAINING PLANS. STPs are developed for each NAS Plan subsystem that requires training. Each plan includes the initial training required to commission the equipment, and training required to provide for testing and installation as new subsystems are deployed. Airway Facilities Service defines this as "1E Training" in the Call for Training process. Appendix D indicates the STPs which have been forwarded to regional offices.

Each STP contains pertinent data collected from all available sources, including system specifications, contracts, RFPs, proposals, interviews with program managers (FAA, SEIC) and other subject matter experts. The data appears in a standardized format to enhance readability, ease of input to the database, and use in planning and scheduling.

Early initiation of the STP is a primary objective to enable training requirements to be specified and incorporated into contractual documentation as early as possible. These project training requirements are coordinated with key managers to ensure that they are understood, adequately documented, and satisfied.

(1) STP Sections. Each STP contains seven main sections.

(a) Purpose of Plan. It is a communication and coordination document for planning, requiring FAA review, modification and approval.

(b) System Description. A description of the system's components and/or functions is provided to define hardware/software characteristics and operational and maintenance requirements.

(c) Contract Information. A summary of the contract status, identification of the contractor(s), number of systems to be procured, and training-related deliverables are identified. In addition, the equipment delivery schedule is discussed.

(d) Training Assumptions. Early initiation of the STP requires assumptions to be made to generate the level of detail required to plan training. As events emerge to either confirm or refute the assumptions, the STP is revised accordingly.

(e) Training Requirements. The training program, the maintenance concept of the subsystem(s), training course objectives, student prerequisites, training materials/equipment and number of personnel to be trained are delineated.

(f) Training Program Analysis. The analysis includes issues that might impact the successful accomplishment of training and defines recommended solutions/alternatives. Decisions made to resolve issues are also documented.

(g) Training Schedules. The schedules and attachments that are discussed and/or accompany the STP illustrate system class schedules, milestones and activities. Discussion of class schedules and attachments follows. (Refer to Figures 3-2, 3-3, and 3-4 for samples of the attachments):

1. Class Schedules: The projected class schedules (Figure 3-2) conform to the system deployment schedule. They are no longer a part of the hardcopy STP, but can be found in the TDB maintained by the SEIC Training Representative at Regional Headquarters. See Chapter 4 for more information.

2. Delivery Schedule: The Delivery Schedule is no longer an attachment to the STP. The Material Delivery Database File (MDDF) published in the "NAS Program Master Schedules" as "Equipment Delivery Report" is considered to be the latest official delivery schedule published.

3. Attachment I, Equipment Delivery Sites: Delivery Sites will be listed alphabetically and grouped by Regions (Figure 3-3).

4. Attachment II, Training Development Schedule: This schedule illustrates all of the activities required to develop and conduct training in accordance with NAS

program milestones and is derived from contract information and training assumptions in the STP. Figure 3-4, "Project Training Development Schedule," is an example.

b. TRAINING DATA BASE. Data in the TDB is derived directly from data collection and analysis performed during production of STPs. This data is maintained on a microcomputer utilizing dBASE III Plus, which also produces the reports. The data in each file can be accessed using dBASE III Plus commands or a menu-driven system.

(1) Training Data Base Sheets. Training Data Base Sheets are one-page, at-a-glance documents that provide basic information, such as personnel contacts, number of sites and systems, and start/end dates for a particular project. Figure 3-5, "Training Data Base Summary Sheet," is an example. The fields for this file are discussed in Appendix C, "Training Data Base Data Dictionary." Data elements from the sheets are contained in the Training Summary file of the TDB and can be manipulated to produce reports tailored for specific training planning efforts. An example of a tailored report is included as Figure 3-6, "FAA Technical Center Project Training Requirements List."

(2) Class Schedules. Projected class schedules (to be used for planning purposes only) are developed for each NAS Plan subsystem for which training is required. These class schedules are entered into the TDB dBaseIII Plus Schedules file and are available in the regions via the SEIC training representative.

Figure 3-2, "Class Schedule", and Figure 3-7, "TDB/Training Requirements Matrix," are examples of the type of reports which may be produced using this file. The menu system facilitates the extraction of data from the file in several hardcopy formats.

The fields in the Class Schedule files include:

(a) Project name
(b) Personnel specialty code
(c) Course number
(d) Course hours
(e) Class number
(f) Student location
(g) Region
(h) Number of students
(i) Training location
(j) Training start date
(k) Training completion date
(l) Cost center
(m) Service (AT or AF)
(n) Key
(o) AFS-HUB
(p) Category
(q) Status

The first 13 fields are self-explanatory, and an explanation of the remaining fields follows:

Key - Unique Line Identifier
AFS-HUB - Cost Center Code of the AFS or HUB associated with the record
Category - Category of Training (e.g., 1E)
Status - Flags action on a record (e.g., P - Pending Change, H - Training Complete)

(3) Menu Driven System. The Menu Driven System allows training personnel easy access to the information in the dBase III Plus Schedules and Training Summary Files. This system has been installed both at FAA Headquarters and in the regions. The data in the files is updated periodically by use of a data link (VIRTUALINK) between all Regional Headquarters and the mainframe computer at Washington Headquarters. This link provides users with near real time data on a demand basis. Users can produce reports based on sorts of the available fields in the files via use of the menu system and the dBase III Plus program.

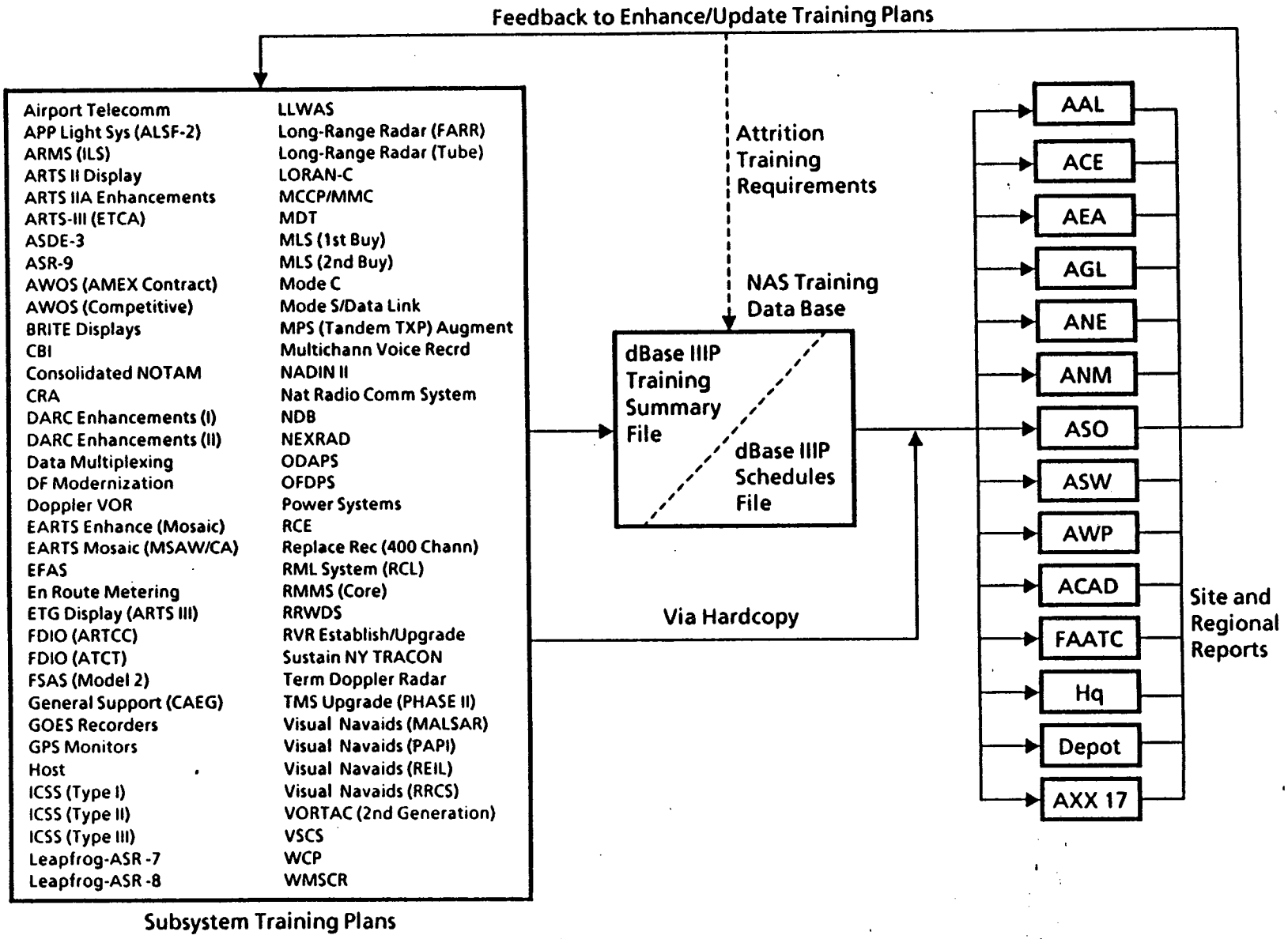

Figure 3-1 NAS Training Information Process (TIP)

G7168-7

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Page No. 1
11/30/87

DBRITE PROPOSED CLASS SCHEDULE
FOR NEW ENGLAND REGION
***** FOR PLANNING PURPOSES ONLY *****

STUDENT'S SPECIALTY	STUDENT'S LOCATION	COST CNTR	# OF STUD.	COURSE LENGTH	CLASS STARTS	CLASS ENDS	TRAINING LOCATION	RECORD #
** COURSE #: 40373								
* CLASS #: 88004								
QUAL AF PERS	BTV	E8174	1	80	05/25/88	06/07/88	ACADEMY	6168
* Subsubtotal *			1					
* CLASS #: 88006								
QUAL AF PERS	BGR	E8100	1	80	06/14/88	06/27/88	ACADEMY	6187
QUAL AF PERS	PWM	E8104	1	80	06/14/88	06/27/88	ACADEMY	6188
QUAL AF PERS	OQU	E8120	1	80	06/14/88	06/27/88	ACADEMY	6189
QUAL AF PERS	PVD	E8120	1	80	06/14/88	06/27/88	ACADEMY	6190
* Subsubtotal *			4					
* CLASS #: 89002								
QUAL AF PERS	BTV	E8174	1	80	10/11/88	10/24/88	ACADEMY	7638
* Subsubtotal *			1					
* CLASS #: 89003								
QUAL AF PERS	HYA	E8120	1	80	10/19/88	11/01/88	ACADEMY	7650
QUAL AF PERS	ZBU		1	80	10/19/88	11/01/88	ACADEMY	7651
QUAL AF PERS	MHT	E8176	1	80	10/19/88	11/01/88	ACADEMY	7652
* Subsubtotal *			3					
* CLASS #: 89005								
QUAL AF PERS	BGR	E8100	1	80	11/02/88	11/15/88	ACADEMY	7680
QUAL AF PERS	PWM	E8104	1	80	11/02/88	11/15/88	ACADEMY	7681
* Subsubtotal *			2					
* CLASS #: 89006								
QUAL AF PERS	OQU	E8120	1	80	11/08/88	11/21/88	ACADEMY	7682
QUAL AF PERS	PVD	E8120	1	80	11/08/88	11/21/88	ACADEMY	7683
QUAL AF PERS	BOS	E8200	1	80	11/08/88	11/21/88	ACADEMY	7692
QUAL AF PERS	BED	E8214	1	80	11/08/88	11/21/88	ACADEMY	7693
* Subsubtotal *			4					

SAMPLE

Figure 3-2 Class Schedule (Sample)

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ATTACHMENT 1: LORAN-C MONITOR EQUIPMENT SITES

REGION	CITY	STATE	LOC ID
AAL	Annette Island	AK	ANN
AAL	Bethel	AK	BET
AAL	Bettles	AK	BTT
AAL	Big Delta	AK	BIG
AAL	Big Lake	AK	BGQ
AAL	Biorka Island	AK	BKA
AAL	Cold Bay	AK	CDB
AAL	Fort Yukon	AK	FYU
AAL	Galena	AK	GAL
AAL	Gulkana	AK	GKN
AAL	Homer	AK	HOM
AAL	Johnstone Point	AK	JOH
AAL	King Salmon	AK	AKN
AAL	Kodiak	AK	ODK
AAL	Mc Grath	AK	MCG
AAL	Nenana	AK	ENN
AAL	Nome	AK	OME
AAL	Northway	AK	ORT
AAL	Sisters Island	AK	SSR
AAL	Unalakleet	AK	UNK
AAL	Yakutat	AK	YAK
ACE	Alliance	NE	AIA
ACE	Farmington	MO	FAM
ACE	Hill City	KS	HLC
ACE	Kirksville	MO	IRK
ACE	Mankato	KS	TKO
ACE	Neola	IA	EOL
ACE	North Platte	NB	LBF

SAMPLE

Figure 3-3 Equipment Delivery Sites List (Sample)

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ATTACHMENT 2: PROJECT TRAINING DEVELOPMENT SCHEDULE

	ACTIVITY	DATE
1.	System Requirements Approved	
2.	AT Training Proposal Complete	
3.	AF Training Proposal Complete	
4.	Procurement Request Released for Training	
5.	Contract Award	
6.	Preliminary Design Review	
7.	Initial TDB Class Schedule	
8.	Job Task Analysis Draft Complete	
9.	Job Task Analysis Review Complete	
10.	Job Task Analysis Final Complete	
11.	Contract Training Plan Draft Complete	
12.	Contract Training Plan Review Complete	
13.	Contract Training Plan Final Complete	
14.	Critical Design Review Complete	
15.	Post CDR Revision to STP	
16.	Course Design Guide Draft Complete	
17.	Course Design Guide Review Complete	
18.	Course Design Guide Final Complete	
19.	Course Materials Draft Complete	
20.	Course Materials Review Complete	
21.	Course Materials Final Complete	
22.	Final Revision to STP	
23.	Final Update to TDB Class Schedule	
24.	Deployment Readiness Review	
25.	System Delivered to First Operational Site	
26.	First ORD	
27.	Last ORD	

SAMPLE

Figure 3-4 Training Development Schedule (Sample)

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04/13/88 RECORD NO. : 23
14:21:37 LAST UPDATE :04/13/88

TRAINING DATA BASE

PROJECT NAME: ARTS IIA ENHANCEMENTS BROWN BOOK#: 2-06
SMART SHEET#: 2060 CURRENT STP: 02/04/88
SEIC TNG MGR: WARDLOW, 646-5915 TNG P.R. COMPL : 01/04/84
APT-300 MGR: SKALSKI AT T.P. COMPL: N/A
ASM-210 MGR: WEIMER CONTRACT DATE: 07/18/85
AAT-14 MGR: BROWN, 267-9208 PDR DATE : 11/01/85
TRNG SPEC: NONE CDR DATE: 05/30/86

FAA PROG MGR: JOHN HORROCKS, AAP-320, 267-8364
CONTRACTING OFFICER: INEZ WILLIAMS, , 267-3677
SEIC PROG MGR: JOHN LUPNACCA, 646-5677
ACAD.TNG.MGR.(COTR) AF: STEVE MASON, FTS-747-4857
ACAD.TNG.MGR.(COTR) AT: WENDELL ROUTON, FTS-749-4347

PROJECT CONTRACTOR: UNISYS
CONTRACTOR TRNG REP: B. ZABER, 215-648-2810

OF SITES IMPACTED: 90 # OF SYSTEMS PROCURED: 97
FIRST INSTALLATION LOCATION: ATLANTIC CITY, NJ. DATE: 06/16/88
TEST LOCATION: FAATC START: 11/17/86 COMPL: 05/30/87
LAST SITE COMMISSIONED: 05/01/89
DATE EQUIP DELIVERED TO ACADEMY: 11/25/86 TURNKEY DAYS: 20
AF TPR ACAD: 12 TC: 10 FIELD: 256 TOT: 278
AT TPR ACAD: 5 TC: 9 FIELD: 2889 TOT: 2903

NO OF CONTRACTOR COURSES: 2 CLASSES: 14 CONTR TPR: 170
CONTRACTOR TRAINING STARTS: 11/17/86 ENDS: 12/22/86
LOCATION OF CONTRACTOR CLASSROOM TRAINING: ACAD/FAATC
LOCATION OF CONTRACTOR HANDS ON TRAINING: ACAD/FAATC

AF JTA ?:YES DATE: 12/16/85 AT JTA ?:YES DATE: 12/16/85
AF CTP ?:NO DATE: N/A AT CTP ?:NO DATE: N/A
AF CBI ?:NO DATE: N/A AT CBI ?:NO DATE: N/A

IS A PROPOSED TRAINING SCHEDULE IN THE TDB ?: YES

DATE AF TRAINING IS ASSUMED BY THE FAA: 01/28/87
DATE AT TRAINING IS ASSUMED BY THE FAA: 09/01/88
METHOD AF: LECTURE/LAB AT: LECTURE/LAB

SYSTEM PRINCIPLES EXAM #: NONE DATE AVAIL: N/A
PERFORMANCE EXAMINATION #: NONE DATE AVAIL: N/A

ARTS IIA ENHANCEMENTS. All trng is developed. FY88 schedules and quota assignments are in CPMIS. Class schedule in TDB being updated to reflect CPMIS sched. Additional courses will be required in FY89 to replace courses canceled in FY87 due to slip in delivery sched. AT cadre training ongoing at FAATC. Training for ATCSs will be conducted regionally.

SAMPLE

Figure 3-5 Training Data Base Summary Sheet (Sample)

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SMART_SHT	PROJ_NAME	BRN_BOOK	TEST_LOC	TEST_START	STUDENTS AT	STUDENTS AF
1020	FDIO (ARTCC)	1-02	FAATC	09/06/85	5	5
1020	FDIO (ATCT)	1-02	FAATC	09/06/85	10	5
1030	DARC ENHANCEMENTS (I)	1-03	FAATC	05/11/84	0	0
1030	DARC ENHANCEMENTS (II)	1-03	FAATC	02/17/87	0	0
1040	EARTS ENHANCE (MOSAIC)	1-04	FAATC	06/01/85	0	5
1040	EARTS ENHANCE (MSAW/CA)	1-04	FAATC	09/02/86	0	12
1050	ODAPS	1-05	FAATC	07/01/87	10	10
1060	TMS UPGRADE (PHASE II)	1-06	FAATC	11/30/88	0	4
1070	HOST	1-07	FAATC/OPS SITE	10/31/84	57	80
1080	EN ROUTE METERING	1-08	FAATC	05/15/87	0	0
1090	CRA	1-09	FAATC	04/30/84	0	2
1100	MODE C	1-10	FAATC	11/30/83	0	2
1110	VSCS	1-11	FAATC	04/24/89	15	10
1120	AAS (PHASE I - ISSS)	1-12	FAATC	05/16/90	74	10
1120	AAS (PHASE IV - ACCC)	1-12	FAATC	11/04/92	0	0
1120	AAS (PHASE III - TCCC)	1-12	FAATC	10/17/91	0	0
1120	AAS (PHASE II - TAAS)	1-12	FAATC	08/10/92	0	0
1130	AUTO ENROUTE ATC (AERA 1)	1-13	FAATC	01/31/89	0	0
2010	ARTS-III (ETCA)	2-01	FAATC	07/12/85	0	0
2020	ARTS-IIIA (ASSEMBLER)	2-02	FAATC	01/06/86	5	15
2040	ADD ARTS III MEMORY	2-04	FAATC	/ /	0	0
2050	FAATC ARTS III MEM	2-05	FAATC	08/30/85	0	0
2060	ARTS IIA ENHANCEMENTS	2-06	FAATC	11/17/86	10	9
2081	ARTS II INTERFACILITY	2-08	FAATC	/ /	0	0
2090	ARTS IIA - MODE S /ASR-9	2-09	FAATC	04/24/87	0	0
2120	TOWER COMM SYSTEM	2-12	FAATC	03/31/92	0	0
2160	BRITE DISPLAYS	2-16	FAATC	02/12/88	2	0
2170	REPLACE TPX-42 SYSTEM	2-17	FAATC	11/10/86	0	0
3010	FSAS (MODEL #1)	3-01	FAATC	01/31/85	5	5
3010	FSAS (MODEL #2)	3-01	FAATC	/ /	0	0
3010	FSAS (MODEL 1,FULL CAP.)	3-01	FAATC	12/12/88	5	5
3020	CWP	3-02	FAATC	11/05/92	5	5
3050	WCP	3-05	FAATC	01/03/89	5	0
3060	IVRS	3-06	FAATC	12/31/84	0	0
3090	AWOS (AMEX CONTRACT)	3-09	FAATC	04/17/87	0	0
3120	LLWAS	3-12	FAATC/OPS SITE	11/15/84	0	0
3130	ICSS (TYPE I)	3-13	FAATC/HOUMA,LA	/ /	0	0
4030	VOT (1ST CONTRACT)	4-03	FAATC	/ /	0	0
4110	DF MODERNIZATION	4-11	FAATC	12/01/86	0	0
4120	MODE S/DATA LINK	4-12	FAATC	12/01/88	39	0
4130	ASR-9	4-13	FAATC/HUNTSVILLE,AL	06/10/87	3	0
4017	LORAN-C	4-17	FAATC	10/30/87	10	10
5070	NADIN II	5-07	FAATC	02/01/90	8	0
6010	MPS (TANDEM TXP) AUGMENT.	6-01	FAATC OR ACE SITE	/ /	6	0

SAMPLE

Figure 3-6 FAA Technical Center Project Training Requirements List

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Training Requirements Matrix (Number of Students)

NO_OF_STUD	88-1	88-2	88-3	88-4	89-1	89-2	89-3	89-4	90-1	90-2	90-3	90-4	91-1	91-2	91-3	91-4
PROJ_NAME ---> BRITE DISPLAYS																
REGION -> AAC																
1	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0
REGION TOTALS *	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0
REGION -> AAL																
1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
REGION TOTALS *	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
REGION -> ACE																
1	1	7	3	5	0	0	0	0	0	0	0	0	0	0	0	0
REGION TOTALS *	1	7	3	5	0	0	0	0	0	0	0	0	0	0	0	0
REGION -> ACT																
1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
REGION TOTALS *	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
REGION -> AEA																
1	2	10	5	24	0	0	0	0	0	0	0	0	0	0	0	0
REGION TOTALS *	2	10	5	24	0	0	0	0	0	0	0	0	0	0	0	0

SAMPLE

Figure 3-7 TDB/Training Requirements Matrix (Sample)

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4. USERS' INFORMATION

The purpose of this section is to advise specific FAA offices and staff on the parts of the TIP which can help them effectively plan NAS training resources for the near and long term.

Much of the training data contained within each STP was obtained from different FAA organizations. It was analyzed and expanded to produce various outputs and compiled into one document. This facilitates the dissemination of information to the user by having pertinent data in one location and permits transfer of the information to the TDB.

From a training planning perspective, each FAA organization has a need for varying degrees of detailed data and different needs for the data. The FAA organizations that use this type of information range from the FAA Headquarters down to the training elements within each facility. The type of data, the recommended usage, and the organizations affected are discussed in paragraphs 4a through 4d. Paragraph 4e discusses support specific to the annual "Call for Training," as it relates to near and long term training resource planning.

a. HEADQUARTERS. There are four key organizations within FAA Headquarters directly involved in the training process that can use the various data contained within the STPs and the TDB. Figure 4-1, "Recommended Training Data for FAA Headquarters", summarizes the TIP components which can be used by the Technical Training Division (APT-300), the Air Traffic Training Requirements and Certification Branch (AAT-14), the Maintenance Operations Division (ASM-200), and Project Management Offices. The stage of implementation for each NAS Plan Project directly affects how useful the STP/TDB data will be to a particular FAA Headquarters organization. The organizations and the data each can use are discussed in the following sections.

(1) APT-300. In an ideal situation, the STP and TDB data will be developed and delivered to APT-300 prior to or along with the AAT-14/ASM-210 training proposal(s). In this manner, APT-300 will have a substantial amount of data in order to effectively evaluate the strategy for technical training procurement from either a contractor or to task the FAA Academy to develop the training. Should a particular project be already underway with regard to training procurement, the STP/TDB information can still be useful for post-procurement issues. The specific portions of the STP/TDB and their use are discussed in the remaining sections.

(a) STP/TDB Component Usage.

1. System Description. The system description can be used as a central reference source of system equipment/software characteristics, operational uses, and function.

2. Contract Information. A summary of contract information is provided for review by the user.

3. Assumptions. Assumptions provide a "most likely" scenario when system description and contract information do not exist or are uncertain. They also provide a basis for issues analysis.

4. Training Requirements. Course descriptions within this section can be used by APT-300 as an aid in evaluating the decision to either procure training from a contractor or to task the FAA Academy with the course development. These descriptions also serve as an aid in the writing of training procurement requests by ensuring that the appropriate level of training is being procured.

   Total numbers of personnel to be trained within this section provide "best available" data as to the total initial cadre training requirement as defined by FAA Headquarters. For Airway Facilities, the numbers represent the minimum number of personnel to be trained that can adequately field the system; they may not reflect the total number of personnel that ultimately need training. For Air Traffic, the numbers represent the total training requirement since all personnel normally need to be trained prior to the new system's being declared operational. This information can be used in evaluating the decision to procure training and/or how much training to procure.

5. Training Program Analysis. Issues raised during the analysis of the project are the most important pieces of data within the STP for APT-300 use. Issues can be a driver in the decision to procure training from a contractor or in the decision to modify an existing training contract. These issues also provide data on a number of topics, including whether there is sufficient time to procure training, whether training can be delivered and completed prior to system delivery, and recommendations of specific training strategies. This type of data can also be used in training planning during the annual "Call for Training" process.

6. Project Training Development Schedule. This schedule provides the projected milestones for key training development activities for a particular project. This information can be used as a guideline for the development of contract deliverable dates prior to contract award as well as for refinement of the deliverable dates during any post-contract award meetings.

7. Class Schedules. Class schedules are contained in the automated TDB.

These schedules show numbers of personnel and projected class dates and provide an insight into the overall scope of the total training requirement necessary to field the system. These schedules reflect the best estimate of how to accomplish the training required to implement the new system. This data can be used to justify training procurement and/or FAA Academy workload decisions. When viewed with respect to the annual "Call for Training", APT-300 can validate the quota input from the field for various courses.

Class schedules are provided FOR PLANNING PURPOSES ONLY.

(2) AAT-14 and ASM-210. It should be noted that the value of the STP/TDB data depends directly on the stage of implementation for the project under review. The specific portions of the STP/TDB for use by AAT-14 and ASM-210 are discussed in following paragraphs.

(a) STP/TDB Component Usage.

1. System Description. The system description can be used as a central reference source of system equipment/software characteristics, operational uses, and function.

2. Assumptions. Assumptions provide a "most likely" scenario to form the basis for issues analysis when system description and contract information do not exist or are uncertain.

3. Training Program Analysis. This section is the most useful for determining overall impact on a particular project. Issues resulting from the training analysis can drive a modification of an existing contract, the initiation of a training contract or a decision to task the FAA Academy for training development. These training issues can also alert the FAA to potential slippages in program or training development that might adversely affect the planned training strategy or planning during the annual "Call For Training". Finally, training issues can be useful as points for discussion and evaluation during post-contract award conferences with respect to contractor deliverables and milestones.

4. Class Schedules. Class schedules are no longer a part of the STP. They are now found solely in the automated TDB, FOR PLANNING PURPOSES ONLY.

Although the class schedules continually change to reflect the most up-to-date estimate of projected training, they are nonetheless useful at the headquarters level in determining the overall size of the training requirement at a national, regional, or site level. AAT-14 and ASM-210 know the total number of personnel to be trained for each project; however, the class schedules more clearly define the training requirement in terms of how many personnel and from which site those personnel must come from. This information is helpful in estimating the numbers of personnel to be trained as it applies to the annual "Call for Training" and for near term and long term planning of training resources.

5. Training Summary Sheets. Information contained on this sheet is most useful when it can be made available to the user prior to training proposal development. First site delivery dates, projected contract award dates, and critical design review dates can drive the planning for when training needs to be developed, when it needs to be conducted, and when the training proposal and purchase requests need to be generated. These data are essential in the planning during the annual "Call for Training" process, since they define the necessary time frames for developing and conducting training.

(3) Project Management Offices. The FAA Project Management Offices are responsible for ensuring that previously identified training requirements are met. The data in the STPs and TDB can be used more effectively if available during the infancy stages of a particular project so that the training requirements and issues are clearly defined before contract award. After contract award, the data is useful in the identification of gaps or redundancies in the training program. The specific portions of the STPs and TDB that are particularly relevant to project management are covered in the remainder of this section.

(a) STP/TDB Component Usage.

1. System Description. The system description can be used as a central reference source of system equipment/software characteristics, operational uses, and function.

2. Contract Information. A summary of contract information is provided for review by the user.

3. Assumptions. Assumptions provide a "most likely" scenario to form the basis for issues analysis when system description and contract information does not exist or is uncertain.

4. Training Program Analysis. Issues resulting from the training analysis are the most important aspect of the STP to project management. For project management, they will provide information on whether or not training can be accomplished prior to scheduled Initial Operating Capability (IOC) of the system. If not, project management has the option to pursue alternative strategies or as a last resort, delay system delivery until the issue is resolved in a satisfactory manner. This is an important factor in overall training planning. For example, if project management delays system implementation, training already planned and budgeted for in the annual "Call For Training" might be adversely impacted.

b. FAA ACADEMY. The FAA Academy can use the training plan information in the STPs and the TDB to assist in projecting resource requirements (instructors, facilities, equipment, supplies, etc.) to support future student loading. The plans provide a more extensive treatment of topics covered in the training proposal, which is useful when the STP is available to the FAA Academy prior to or at the same time as the training proposal. These plans are updated to coincide with the annual "Call for Training" and for long range planning.

(1) Academy SEIC Training Representative Interface. Using selected information from both the STPs and the TDB, the FAA Academy training representative can create specialized reports that sort training data by project and by quarter to facilitate the identification of resource requirements to meet future training needs.

The utility of most STP and TDB information is dependent upon when it is available in the training cycle. When data arrives early in the training procurement process, it can support advanced planning. When data arrives later in the process, it can support project verification, monitoring and possible update. Data available near the end of the cycle is useful for documentation and evaluation. The use of the TIP components is summarized in Figure 4-2, "Recommended Training Data for the FAA Academy," and discussed in the remainder of this section.

(a) STP/TDB Component Usage.

1. System Description. This section gives the SEIC representative basic information about the design and operation of each new system and where it fits into the overall NAS.

2. Contract Information. This provides information on new training products to be developed by the system contractor and a schedule for their delivery. This allows the SEIC representative to coordinate planning with the COTR and FAA Academy management to assure the development of quality training and the smooth transition from contractor-provided to FAA Academy-provided instruction.

3. Training Assumptions. Assumptions provide a "most likely" scenario for issues analysis when system description and contract information do not exist or are uncertain.

4. Training Requirements. These elaborate some of the basic information in the training proposal and suggest the scope of FAA Academy resources required to support the program.

5. Training Program Analysis. This section addresses any problems, exceptions, risks and areas of special concern that may impact FAA Academy training development or implementation by providing advanced notification for planning purposes.

6. Project Training Development Schedule. This calendar of critical events can be used to project and monitor training and training development activities in relation to FAA Academy schedules and resources.

7. Class Schedules. Class schedules are no longer a part of the STP. They are now found solely in the automated TDB maintained by the SEIC training representative.

These allow preliminary planning for a wide range of FAA Academy resources: classrooms, instructors, specialized equipment, etc. They are FOR PLANNING PURPOSES ONLY.

(b) Training Database Components.

1. Training Development Schedule. This summary of the milestones and activities chart can help the SEIC representative monitor the schedule of major training and training development activities.

2. Project Schedules. The class schedule reports can be used to plan, monitor, and update major training events. The SEIC training representative can tailor these reports to support instructor workload planning for AT/AF managers, resource utilization for facility managers, and schedule change impacts for COTRs.

3. Training Database Sheets. The sheets summarize much of the data from the STP and TDB, but also provide some unique information. The total numbers of AF and AT Students provide the Academy with a good idea of the scope of training required. The sheets project the dates that the FAA Academy will be assuming training for a project, and also provide the dates the equipment will be delivered to the FAA Academy.

(c) Special Application: MMAC Transition Plan Support. The SEIC has already begun to incorporate STP and TDB data into a manual overlay system in support of the MMAC Transition Plan. It is planned that this manual system will be upgraded to an automated system. The current system involves plugging STP and TDB information into the following categories:

1. Space
   (aa). Renovation:
   Basic Software Program
   Harvard Program Management
   (bb). Transition: Harvard Program Management
2. Equipment
   (aa). Harvard Program Management
   Acquisition
   Facilities and Equipment
   Training and Equipment
   (bb). Training Systems and Methodology
   Centralized
   Advanced Automation Training System
   Decentralized
3. Operations
   (aa). Present
   (bb). Proposed
4. Human Resource Management
   (aa). Personnel
   (bb). Labor Relations
   (cc). Special Concerns

(2) Air Traffic and Airway Facilities Managers. The SEIC training representative will provide the managers from both AT and AF with information from the STPs and TDB. The STP is a paper document available for detailed planning, while the TDB is a dynamic data base that can be customized to produce reports tailored to FAA Academy needs.

(a) STP/TDB Component Usage.

1. System Description. This section gives AT and AF managers a basic knowledge of the equipment, allowing them to begin planning where the equipment will be located at the FAA Academy, who might develop or instruct courses, what old systems the new systems may replace, etc.

2. Training Assumptions. This information allows training managers to begin designing an overall strategy for developing and delivering a course to meet the system's training requirements, especially in the early stages of acquisition when documentation in key areas such as system description, specification and contract information are under development.

3. Training Requirements. This section, which expands and enriches the information provided in the training proposals developed by AAT-14 and ASM-210, allows the Academy to better estimate the scope of work required to develop courseware to support the new system.

4. Training Program Analysis. Because this section highlights the areas of risk for the training program, it allows managers to focus resources on weak areas, and to plan FAA Academy training support with a knowledge of constraints and issues.

5. Project Training Development Schedule. This section summarizes the major deliveries in the training development and delivery cycle. It provides a means for FAA Academy and Headquarters personnel to verify delivery schedules for documents and services.

(b) Training Data Base Components.

Class schedules allow managers to begin advanced planning of instructor staffing and scheduling. They are provided in the TDB FOR PLANNING PURPOSES ONLY.

1. Project Schedules. The SEIC training representative can tailor the class schedule database to incorporate the AT and AF training manager's modifications to the generic class schedules provided in the STP. This facilitates workload planning.

2. Training Data Base Sheets. These provide managers with certain items of planning data not found in other sections of the STPs and TDB. They provide the dates when equipment will be delivered and training will be assumed by the FAA Academy. Theory/performance examinations planning should also be verified to assure that headquarters and FAA Academy decisions are in agreement.

(3) Contracting Officer's Technical Representative (COTR). Because COTRs must monitor the work of contractors who are often geographically distant, they are constantly seeking information on contractor plans and performance. The STP and TDB can provide some of this information.

(a) STP/TDB Component Usage.

1. System Description. This section gives the COTR a good, general understanding of the design and operation of each new system and where it fits into the overall NAS.

2. Contract Information. This provides COTRs with advanced planning data on major elements of the contract they will evaluate and track.

3. Training Assumptions. This information allows COTRS to begin designing an overall strategy for developing and delivering a course to meet the system's training requirements, especially in the early stages of acquisition when documentation in key areas as system description and contract information do not exist or are uncertain.

4. Training Requirements. This section provides the COTR with additional training planning information.

5. Training Program Analysis. This section alerts the COTR as to where problems are likely to arise, what deliverables or deadlines may cause the most trouble or what areas of the project are most at risk.

6. Project Training Development Schedule. This section summarizes all major contract activities, deliverables and deadlines, facilitating the tracking of each project for which the COTR is responsible. COTRS can overlay projects under their cognizance to help them anticipate workloads.

(b) Training Data Base Components.

Class schedules allow managers to begin advanced planning of instructor staffing and scheduling. They are provided in the TDB FOR PLANNING PURPOSES ONLY.

1. Project Schedules. The class schedules can be used by COTRs to assess the impact of program changes, such as contractor schedule slips, on class scheduling.

2. Training Data Base Sheets. These sheets summarize onto a single form much of the data available from the STP and TDB, as well as providing a number of unique information fields. COTRs can use them to monitor number of contractor courses, location of contractor classroom training and location of contractor hands-on training.

(4) FAA Academy Facility Management. The STPs and TDB provide the facility managers with useful planning information, such as equipment delivery to the FAA Academy and classroom space requirements. This information is available from the SEIC training representative.

(a) STP/TDB Component Usage.

The Project Training Development Schedule, a calendar of significant project events, helps the facility managers to plan and schedule use of their facilities based on the arrival of equipment, the training start and end dates, and any Academy instructor training dates.

(b) Training Data Base Components.

1. Project Schedules. These tailored class schedule reports can be adapted to the needs of facility managers to allow them to plan classroom and laboratory space using updated data from the SEIC training representative. This can be done in coordination with the AT and AF training managers.

These schedules allow the facility manager to plan for specific numbers of students on specific dates, focusing on peaks and valleys of student loading. Class schedules are provided in the TDB FOR PLANNING PURPOSES ONLY.

2. Training Data Base Sheets. These sheets include useful facility planning data, including equipment delivery, the date training begins at the FAA Academy, and an estimate of the number of students to expect.

c. FAA TECHNICAL CENTER (FAATC). The FAA Technical Center can use the training planning information in the STPs and the TDB to assess initial training quota requirements for NAS plan programs which undergo integration and test there. The use of the STP's and the TDB are summarized in Figure 4-3, "Recommended Training Data for the FAA Technical Center."

(1) STP/TBD Component Usage. SEIC personnel at the FAATC are capable of providing training planning data to the organizations there by using the STPs and TDB. The elements contained in these two sources and their suggested application at the FAATC are discussed below.

(a) STP Component Usage.

1. System Description. The system description provides those involved with initial testing at the FAATC with an early reference for system hardware and software characteristics. Those who are responsible for maintenance of the system following testing can use it in determining resource requirements.

2. Contract Information. Provides all organizations with information on training products to be supplied by the systems contractors. It is useful in determining if unique FAATC requirements will be provided in the contract or if other sources will be required.

3. Training Assumptions. In the absence of firm contract information, the training assumptions provide a "most likely" scenario for issues analysis. The assumptions provide a basis for planning when actual data is uncertain or does not exist.

4. Training Requirements. This section establishes what training is being developed to support the subsystem. It provides a basis for determining whether the courses being included in the program will be sufficient for the various FAATC activities to carry out their respective test, software maintenance, hardware configuration and maintenance responsibilities. This section discloses the approved maintenance concept of the subsystem, useful to those who will be responsible for maintenance of the subsystems located at the FAATC following initial testing of the equipment.

   Training requirements establish the prerequisites needed to attend the planned courses, allowing FAATC managers to plan for their personnel to acquire those prerequisites prior to attending needed training.

   The course objectives contained in this section give managers an overview of what areas their personnel will be trained in, providing a planning tool for personnel management.

   Course names and course numbers are provided, if/when available, for use in the "Call for Training."

   The training requirements section contains data on the total spectrum of training - AF, AT, hardware and software. All FAATC organizations, whether involved in initial test, configuration management, life cycle software maintenance, or equipment maintenance, thus can determine what the scope of their upcoming training requirements will be.

5. Project Training Development Schedule. These schedules are supplied in hardcopy format with every STP. They are useful in tracking the progress of training development. FAATC organizations can request up-to-date information on how the development of training elements of any subsystem is progressing; the SEIC

personnel can track these elements and provide information by utilizing these schedules.

(b) Training Data Base Components.

1. Class Schedules. Class schedules are available to FAATC managers in hardcopy format from the SEIC personnel there. The schedules provide information on planned training dates and locations for FAATC personnel, including length of course, course numbers and number of personnel per organization to be trained. It is very useful planning information in that it enables managers to project personnel training requirements. Class schedules are provided FOR PLANNING PURPOSES ONLY.

2. Training Data Base Sheets. The data contained in the sheets is intended to provide a high level synopsis of information which directly relates to training development for all subsystems. FAATC managers are provided information on where and when subsystems will undergo initial test; whether a subsystem will be delivered to the FAATC; how long the test period will be; and a general idea of the scope of training. This is useful in planning FAATC requirements for its role in support of the NAS Plan.

The data contained in the data base file itself can be arranged and delivered in hardcopy format by the SEIC personnel to FAATC organizations to enhance management analyses of requirements.

d. REGIONS. Regions can use the training planning information in the STPs and the TDB to assess their initial training quota requirements in relation to their attrition, recurrent and new hire training needs (referred to as "other training" in following paragraphs) and their staffing requirements for maintaining safe and efficient operations. On the basis of those assessments, regional FAA training managers, supported by the regional SEIC Training Representative will be better able to determine the optimum quota assignment mix for initial and "other" training during the annual "Call for Training" process. Figure 4-4, "Recommended Training Data for the Regions," summarizes which elements of the TIP are recommended for regional applications.

(1) STPs. There follows a discussion concerning which elements in the STPs are useful in the regions, and how best for training personnel to utilize those elements.

(a) System Description. The system description can be used as a central reference source of system equipment/software characteristics, operational uses, and function.

(b) Training Assumptions. The SEIC Regional representative should review these prior to providing the Region-specific Database printouts to FAA training personnel. The assumptions provide some basis for the development of the STPs in the absence of confirmed fact. This must be understood so that the TDB products can be reviewed in context. As assumptions made early in project development are resolved, the SEIC representative should update the TDB material with current information, including STP updates.

(c) Training Requirements. This section of the STP provides a description of the course(s) which are being planned for a particular subsystem. It also includes course objectives/outcomes, prerequisites, maintenance concept and total numbers of personnel to be trained. These items provide a basis for managers to identify personnel resources to fill training quotas. Managers can minimize and manage short falls of personnel qualified to enter the course(s) by sending them to prerequisite courses before NAS Plan Subsystem Training classes are scheduled, or look to other sources for qualified personnel. Managers can use the Requirements section of STPs to identify and track "other training" needs in their divisions that will occur as a result of NAS Plan projects.

(d) Training Program Analysis. This section is the most useful for determining overall impact on a particular project. Issues resulting from the training analysis can drive a modification of an existing contract, the initiation of a training contract or a decision to task the FAA Academy for training development. These training issues can also alert the FAA to potential slippages in program or training development that might adversely affect the planned training strategy or planning during the annual "Call For Training".

(e) Equipment Delivery Sites List. This list contains the locations which will receive the equipment. Regional users can thus determine where in their management areas a given piece of equipment will be installed and then determine if support activities at those locations have appropriate personnel resources to be trained.

(2) The Region-Specific Training Data Base. The Regional SEIC Training Representative can develop and maintain a Region-Specific Training Data Base for the regional Human Resource Development Officer (HRDO, XXX-17), the Regional Airway Facilities training manager (XXX-400), and the Regional Air Traffic training manager (XXX-500). This Region-Specific TDB would be composed of selected information from the STPs and the TDB. In addition, the Region-specific TDB would be composed of "other" training requirements for the near term and long term to be addressed by the "Call for Training" process.

(a) Region-Specific TDB Management. In compiling the Region-Specific TDB, the SEIC Training Representative is constrained in what can be done with information and specifications generated by FAA Headquarters. They are not subject to change by the Regional SEIC representative. For example, the total number of training quotas per project (number required to commission and field the system, Category 1E) assigned to a region cannot be increased arbitrarily by either the SEIC Regional representative or by the FAA Regional training personnel since these quotas are provided by FAA Headquarters. Also, projected class dates shown in the TDB cannot be changed since these are derived from the system procurement, and they support and conform to the entire delivery schedule. Rearrangement of quota assignments within these parameters is, however, encouraged, as is coordination with other regional training personnel to facilitate the most advantageous planning data for all.

(b) TDB Inputs.

1. Course names and numbers. These are given for projected training course identification and controlling projected personnel assignment.

2. Class numbers. These are for tracking projected personnel assignments.

3. Class start and end dates. These help to assess which projected classes best support the training requirements of the Region in relation to system deliveries. They also allow for optimizing personnel assignments and assessing overlap between initial and "other training" scheduling.

4. Number of students per site per class/length of course. These are useful for personnel assignment and projections of personnel time away from assigned duties.

5. Training location. This is used to project local training support, travel, and lodging requirements. It allows for assessing the impact of overlapping, competing and mixed training delivery strategies.

6. Cost Center Codes. These are used to determine the duty station of the person who will maintain or operate the system specified. This information is especially useful when dealing with Airway Facilities training quota issues because there are occasions when the equipment location and the location of the person who maintains it are different.

(c) Region-Specific TDB Applications. The SEIC Regional Training Representatives provide training requirements, briefings and printouts of the Region-Specific TDB to their HRDO, AT training and AF training counterparts at the FAA Regional Headquarters and other region distribution points as specified by region guidelines. At the time that they deliver the printouts, they will brief their FAA regional counterparts on the training assumptions and course descriptions associated with the printouts and assess their relationship to the appropriate system delivery schedule. They will also identify any regional issues that may have surfaced during the review.

FAA Regional Headquarters personnel then review the printouts to determine whether the projected class schedules and quota assignments support their training requirements in relation to initial system deliveries at sites within the region. They can project future personnel assignments by job specialty and site to the projected classes. Finally, they incorporate the results of their review into planning for "other training" requirements. They return the annotated Region-Specific TDB printouts to their SEIC Regional Training Representative.

At this point, the SEIC Regional Training Representatives update the Region-Specific TDB as required, including reviewing the updated Region-specific TDB against the TDB, and coordinating any changes in class assignments. They forward the recommended changes to the Regional Training Coordinator at SEIC Headquarters. Figure 4-5, "SEIC Regional Representatives," is a list of names and telephone numbers of the personnel in the Regional SEIC offices who act as the Training Representatives.

e. TRAINING DATA DEVELOPMENT. Training is inherent in every phase of the NAS program. Effective and timely planning for training is necessary to help ensure continued operational utility and supportability.

Identification of Training requirements must begin as early as possible and be reassessed throughout the acquisition process as necessary to assess and reduce the risks, and to evaluate the effectiveness and suitability of the training being developed. However, not all programs can be addressed at the same level. As a result, a systematic approach to the training program is being implemented to provide an orderly transition while avoiding disruption of training programs currently in development.

This approach will not affect the initial development of STPs for each project, but will focus further refinement of STPs on the projects where training will be required within the target fiscal year and the interim years, depicted in Figure 4-6, "Training Data Development Timelines." This focus of

STP/TIP development will provide the FAA headquarters and Regional training personnel with the most current meaningful planning information available.

A major area of training support for FAA planning is directly related to the annual "Call for Training ". This support is being provided through selective use of portions of the TIP. Figure 4-6 provides the timelines for the activities associated with this support. This activity in the example shown begins in April of 1988 and supports scheduling of classes for FY 90, which in turn, supports the annual " Call For Training" for FY 90; this call is to be issued by headquarters in November 1988. To support this effort all STPs and the related schedule data is being refined and updated between April and September 1988, and will be made available to the FAA's HQ and SEIC regional Logistics and Training representatives. This update will ensure that new equipment training quotas will be as accurate as possible when issued by the HQs. During the October 1988 to March 1989 time period this data in the form of TIP updates will be provided for use by the regions for their planning updates, and for the FAA HQs at the FY 90 Programming Conference to be held in April 1989. The planning for FY 91 will begin during this same time frame and the STPs which address the next "Call for Training" will be completed with draft scheduling information. These TIP schedules will be refined and updated in preparation for the November 1989 release of the "Call for Training" for FY 91, starting the cycle over again.

I. Subsystem Training Plan	APT-300	AAT-14	ASM-200	Proj Mgmt
A. System Description	X	X	X	X
B. Contract Information	X			X
C. Training Assumptions	X	X	X	X
D. Training Requirements	X			
E. Training Program Analysis	X	X	X	X
F. Training Schedules				
(1) Equipment Delivery Sites List				
(2) Training Dev Schedule	X			

?. Training Data Base				
A. Data Base III Plus Reports				
(1) Project Class Schedules		X*	X*	
(2) Training Data Base Sheets		X	X	

* Course Names/Numbers, Class Numbers, Class Start/End Dates, Number of Students/Site/Training Location

Figure 4-1 Recommended Training Data for FAA Headquarters

G7049-2

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	SEI	AT/AF	COTR	Academy Mgmt
1. Subsystem Training Plan				
A. System Description	X	X	X	
B. Contract Information	X		X	
C. Training Assumptions	X	X	X	
D. Training Requirements	X	X	X	
E. Training Program Analysis	X	X	X	
F. Training Schedules				
(1) Equipment Delivery Sites List				
(2) Training Dev Schedule	X	X	X	X
2. Training Data Base				
A. Data Base III Plus Reports				
(1) Project Class Schedules	X*	X*	X*	X*
(2) Training Data Base Sheets	X	X	X	X

* Course Names/Numbers, Class Numbers, Class Start/End Dates, Number of Students/Site/Training Location

Figure 4-2 Recommended Training Data for FAA Academy

G7049-3

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1. Subsystem Training Plan	APM-160	ATR-240/250	ACT-600	ACT-100
A. System Description	X	X	X	X
B. Contract Information	X	X	X	X
C. Training Assumptions	X	X	X	X
D. Training Requirements	X	X	X	X
E. Training Program Analysis				
F. Training Schedules				
(1) Equipment Delivery Sites List				
(2) Training Dev Schedule	X	X	X	X

2. Training Data Base				
A. Data Base III Plus Reports				
(1) Project Class Schedules	X*	X*	X*	X*
(2) Training Data Base Sheets	X*	X*	X*	X*

*Provided as needed by SEI representative

Figure 4-3 Recommended Training Data for the Technical Center

G7049-4

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	Region SEI	HRDO-XXX-17	AT-XXX-500	AF-XXX-400
1. Subsystem Training Plan				
A. System Description	X	X	X	X
B. Contract Information				
C. Training Assumptions	X	X	X	X
D. Training Requirements	X	X	X	X
E. Training Program Analysis	X	X	X	X
F. Attachments				
(1) Equipment Delivery Sites List	X	X	X	X
(2) Training Dev Schedule				
2. Training Data Base				
A. Data Base III Plus Reports				
(1) Project Class Schedules	X*	X*	X*	X*
(2) Training Data Base Sheets	X	X	X	X

* Course Names/Numbers, Class Numbers, Class Start/End Dates, Number of Students/Site/Training Location

Figure 4-4 Recommended Training Data for the Regions

G7049-5

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REGIONAL/FAA ACADEMY TRAINING COORDINATORS

Alaska	Dianne Whitfield	907-271-3560*
Central	Tom Perry	816-374-6833
Eastern	Mike Ceglia	718-917-0378
Great Lakes	Bill Baumann	312-694-7781
New England	John Topitzer	617-273-7237
Northwest Mountain	Mike Thibodeau	206-244-2651
Southern	Cecil West	404-761-6070
Southwest	Bill Sloan	817-878-5452
Western Pacific	Don Hollum	213-297-0029
FAA Academy	Fred Fairweather	405-686-2380
FAA Technical Center	Ernest Vaughn	202-646-5367

* FEDERAL TELEPHONE SYSTEM (FTS)

TRAINING COORDINATORS

Alaska	Dick Cullins	646-5497
Central	J.J. Furtek	646-5428
Eastern	Bill Teed	646-5337
Great Lakes	Carol Neumann	646-5363
New England	Ernest Vaughn	646-5367
Northwest Mountain	Howard Burnette	646-5344
Southern	Tom Carroll	646-5587
Southwest	Bill Collins	646-5542
Western Pacific	Ernest Vaughn	646-5367
FAA Depot	Bob Stisitis	646-2231
FAA Academy	Mary Ellen Stull	646-5346
FAA Technical Center	Ernest Vaughn	646-5367

Figure 4-5 SEIC Regional Training Representatives

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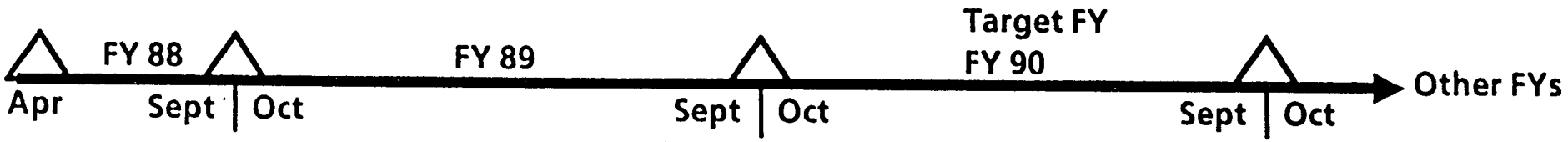
Training Data Development Timelines



4/1 — 9/30
- Complete STP narratives for projects with training in FY 90
- Maintain/update schedules for class/delivery/installation changes for TDB users

△ 10/1 Provide training requirements input into FY 90 "call for training"

10/1 — 3/31
- Complete STP narratives for projects with training in FY 91
- Maintain/update schedules for FY 90 for TDB users

△ 4/1 Support FY 90 programming conference

4/1 — 9/30 Maintain/update schedules for FY 90/91 for TDB users

△ 10/1 Provide training requirements input into FY 91 "call for training"

Figure 4-6 Training Data Development Timelines

G7070-2

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APPENDIX A

ABBREVIATIONS AND ACRONYMS

AAS	Advanced Automation System
AATS	Advanced Automation Training System
ACF	Area Control Facility
AF	Airway Facilities
AFS	Airway Facilities Sector
AFSS	Automated Flight Service Station
ARTS	Automated Radar Tracking Systems
ARTCC	Air Route Traffic Control Center
AT	Air Traffic
ATC	Air Traffic Control
ATCS	Air Traffic Control Specialist
ATCT	Air Traffic Control Tower
CDR	Critical Design Review
CDRL	Contract Data Requirements List
COTR	Contract Officers Technical Representative
CPMIS	Consolidated Personnel Management Information System
DID	Data Item Description
DOT	Department of Transportation
FAA	Federal Aviation Administration
FAATC	FAA Technical Center
FPL	Full Performance Level
HOE	Hands on Equipment
HOT	Hands on Training
HRDO	Human Resource Development Officer
IAW	In Accordance With
IOC	Initial Operating Capability
ISD	Instructional Systems Development
ILS	Integrated Logistics System
ILSP	Integrated Logistics Support Plan
ISP	Integrated Support Plan
JTA	Job Task Analysis
LRU	Line Replaceable Unit
LSA	Logistics Support Analysis
MCC	Maintenance Control Center
MMAC	Mike Monroney Aeronautical Center
NAILS	National Airspace Integrated Logistics System
NAS	National Airspace System

APPENDIX A

ABBREVIATIONS AND ACRONYMS

OJT	On-the-Job Training
PDR	Preliminary Design Review
PLATO	Programmed Logic for Automatic Teaching Operations
PR	Procurement Request
RFP	Request for Proposal
RMM	Remote Maintenance Monitoring
SEIC	Systems Engineering and Integration Contractor
SOW	Statement of Work
STP	Subsystem Training Plan
TBD	To Be Determined
TDB	Training Data Base
TIP	Training Information Process
TOC	Training Oversight Committee
TP	Training Proposal
TWG	Training Working Group

APPENDIX B

APPLICABLE DOCUMENTS

Airway Facilities Maintenance Technical Training Program, FAA Order 3000.10A, (Most current version).

Air Traffic Training, FAA Order 3120.4F, (Most current version).

Airway Facilities Career Planning Program, FAA Order 3410.12, (Most current version).

Airway Facilities Human Resource Plan (FY1984 to FY1989), Technology Applications, Inc., (Most current version).

Airway Facilities Maintenance Personnel Certification Program, FAA Order 3400.3E, (Most current version).

ATCS Screening Placement and Training at the Academy an Interim System Proposal for the Years 1985 to 2000, FAA Staff Study, (Most current version).

Contract Training Programs, FAA-STD-028, (Most current version).

Direct Access Radar Channel (DARC) Training, FAA Order 3120.20, (Most current version).

Employment Policy for Developmental Air Traffic Control Specialists, FAA Order 3330.30C, (Most current version).

Executive Summary, Order 6000.27A, Transmittal of the Maintenance Philosophy Steering Group Report, (Most current version).

FAA Academy Training, FAA-Order 3000.18 (Most current version).

FAA Catalog of Training Courses, (Most current version).

Functional Description of the NAS Maintenance Control Center, FAA Report No. WP-59-FAA 426-2, (Most current version).

Maintenance and Operations Support Plan, Final Draft by DOT/FAA., (Most current version).

National Airspace Integrated Logistics Support Policy, FAA Order 1800.58 (Most current version).

NAS Level I, Design Document, (Most current version).

NAS System Specification Vol. I-V, Functional and Performance Requirements for the NAS Air Traffic Control Element, (Most current version).

National Airspace Integrated Logistics Support (NAILS) Program Plan, (Most current version).

APPENDIX B

APPLICABLE DOCUMENTS

National Airspace System Plan, Facilities, Equipment and Associated Development, (Most current version).

National Airspace System Program Master Schedule and Project Master Schedules (Most current version).

National Airspace System Requirements, (Most current version).

National Air Traffic Training Tracking System, FAA Order 3120.22A, (Most current version).

National En Route Air Traffic Data Specialists Training Program, FAA Order 3120.16A, (Most current version).

National En Route and Terminal Air Traffic, FAA Order 3120.18A, (Most current version).

National Flight Service Station Traffic Training Program, FAA Order 3120.15A, (Most current version).

National Training Program Pre-developmental ATCS, FAA Order 3120.17A, (Most current version).

Preparation of Procurement Requests, FAA Order 4400.42, (Most current version).

Policy for Maintenance of the Airspace System (NAS) FAA Order 6000.30A, (Most current version).

Training Analysis Guidelines (Draft) (Logicon), FAA-I-84-0175, (Most current version).

Training, FAA Order 3000.6B, (Most current version).

Transmittal of Maintenance Philosophy Steering Group (MPSG) Report-1984 Update (Final Draft) DOT Order 6000.27A. (Most current version)

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10/08/87
19:30:36

TRAINING DATA BASE

RECORD NO. : (1) *
LAST UPDATE : (1)

BROWN BOOK #: (3)
CURRENT STP: (5)
TNG P.R. COMPL : (7)
AT T.P. COMPL: (9)
CONTRACT DATE: (11)
PDR DATE : (13)
CDR DATE: (15)

PROJECT NAME: (2)
SMART SHEET #: (4)
SEIC TNG MGR: (6)
APT-300 MGR: (8)
ASM-210 MGR: (10)
AAT-14 MGR: (12)
TRNG SPEC: (14)

FAA PROG MGR: (16)
CONTRACTING OFFICER: (17)
SEIC PROG MGR: (18)
ACAD.TNG.MGR.(COTR) AF: (19)
ACAD.TNG.MGR.(COTR) AT: (20)

PROJECT CONTRACTOR: (21)
CONTRACTOR TRNG REP: (22)

OF SITES IMPACTED: (23) # OF SYSTEMS PROCURED: (24)
FIRST INSTALLATION LOCATION: (25) DATE: (26)
TEST LOCATION: (27) START: (28) COMPL: (29)
LAST SITE COMMISSIONED: (30)
DATE EQUIP DELIVERED TO ACADEMY: (31) TURNKEY DAYS: (32)
AF TPR ACAD: (33) TC: (34) FIELD: (35) TOT: (36)
AT TPR ACAD: (37) TC: (38) FIELD: (39) TOT: (40)

NO OF CONTRACTOR COURSES: (41) CLASSES: (42) CONTR TPR: (43)
CONTRACTOR TRAINING STARTS: (44) ENDS: (45)
LOCATION OF CONTRACTOR CLASSROOM TRAINING: (46)
LOCATION OF CONTRACTOR HANDS ON TRAINING: (47)

AF JTA ?: (48) DATE: (49) AT JTA ?: (50) DATE: (51)
AF CTP ?: (52) DATE: (53) AT CTP ?: (54) DATE: (55)
AF CBI ? (56) DATE: (57) AT CBI ?: (58) DATE: (59)

IS A PROPOSED TRAINING SCHEDULE IN THE TDB ? :(60)

DATE AF TRAINING IS ASSUMED BY THE FAA: (61)
DATE AT TRAINING IS ASSUMED BY THE FAA: (62)
METHOD AF: (63) AT: (64)

SYSTEM PRINCIPLES EXAM #: (65) DATE AVAIL: (66)
PERFORMANCE EXAMINATION #: (67) DATE AVAIL: (68)

*******THIS IS A TEST. DO NOT RESPOND TO THIS DATA (69)
RIGHT AWAY.*****

APPENDIX C
TRAINING DATA BASE
DATA DICTIONARY
06/24/88

PURPOSE:

Provides a description of the fields in the Training Data Base, guidance on how they are to be completed, and potential sources of information. Nothing in this document should be construed as limiting sources of data for subsystem training plan development. The information collected in accordance with this dictionary should be considered as a summary level or starting point for more detailed training plan development.

For each data field listed below, the dBASE III PLUS field name, type, and width appear within parentheses. Note that a series of related dBASE field names may apply to data fields that contain names, office routing symbols, and telephone numbers (e.g., data field 16).

DATA FIELDS

1. LAST UPDATE (UPDATE Date 8):

Latest date that any of the information on the project training data base record was updated.

2. PROJECT NAME (PROJ_NAME Character 30):

The Program Name as found in the Brown Book followed by the specific project name in parentheses. If projects within a program do not have a specific name, one is assigned which clarifies what project and thus the training program which is described in the training data base record. An example would be AWOS (AMEX Contract) and AWOS (Competitive). AWOS is the program - within it are two distinct projects with distinct training programs. The contractors will be different, the systems they produce will be different, the student population is different, and therefore two distinct training programs are required.

3. BROWN BOOK # (BRN_BOOK Character 6):

The program Brown Book number will be used for all of the projects contained in the program. For example, AWOS (AMEX Contract) and AWOS (Competitive) both have the same Brown Book number. Use format: X-XX

4. SMART SHEET # (SMART_SHT Character 5):

Officially called Document-Project Resumes, the Smart Sheets are distributed periodically by APS-10. They contain a summary of the activity for each program. Some describe only one project within a program, others cover multiple projects within a program. The number in this field is the appropriate Resume number.

5. CURRENT STP (TNGPLNCOMP Date 8):

Date that the Subsystem Training Plan was/will be completed.

6. SEIC TNG MGR (TNG_MGR Character 14):
(TNGMGR_PHN Character 12):

Last name of the SEIC Training Specialist assigned to monitor the development of the training program for the project. This individual is responsible for updating the Training Data Base Record and development of training planning information leading to Transition and Site Specific Plans impacted by the project. The SEIC Training Manager will periodically provide status briefings concerning training issues to management. For telephone number use seven digits.

7. TNG P.R. COMPL (PRCOMPL Date 8):

Date that the training procurement request was signed by the manager of APT-300 or is anticipated.

8. APT-300 MGR (APT300MGR Character 14):

Last name of the APT-300 Training Specialist assigned to manage the development of training for the project. This individual's primary role is to consolidate all training requirements and identify funding required to acquire the training.

9. AT T.P. COMPL (AT_TP_DUE) Date 8):

Date that the AT Training proposal was/will be completed.

10. ASM-210 MGR (APM110MGR Character 14):

Last name of the ASM-210 Training Specialist assigned to identify training requirements and manage training conduct for Airway Facilities.

11. CONTRACT DATE (CONT_DATE Date 8):

Date that the project was placed or will be placed on contract. This could be the contract date for prototype development, production, or both. It should be the date of the first contract which drives out a training requirement. For example, if there is a contract for R&D followed by a contract for prototype development followed by a contract for production, use the first contract date which contains training requirements. Generally, R&D contracts contain no training requirements. The date in this field will usually be the prototype development contract if training is required for the test effort. If no training is required for prototype development, this field will reflect the production contract date. Contract dates can usually be found on the Document-Project Resume (Smart Sheet). Use format: MM/DD/YY.

12. AAT-14 MGR (ATR110MGR Character 14):
(ATR110_PHN Character 12):

Last name and telephone number of the AAT-14 Training Specialist assigned to identify training requirements and manage training conduct for Air Traffic. For telephone number use seven digits.

13. PDR DATE (PDR_DATE Date 8):

Preliminary Design Review Date. The date in this field refers to the PDR for the prototype development effort. This date indicates the maturity of the system development. Information gained at the PDR can provide direction to the training planning effort. It is usually early enough so that revisions to training plans can be accommodated. This date can usually be found on the Document-Project Resume. When both a "baseline" date and a "planned" date are shown in your source document, use the "planned" date. Use format MM/DD/YY.

14. TRNG SPEC (TRNG_SPEC Character 5):

The training specification called out in the contract. Use 028, 2552A, or NONE. The spec will be identified in the Training Procurement Request and/or in the Contract.

15. CDR DATE (CDR_DATE Date 8):

Critical Design Review Date. The date in this field refers to the CDR for the prototype development effort. This date indicates the maturity of system development. Information gained at the CDR is more mature than that which was available at the PDR and more detailed training planning can be accomplished at this point. When both a "baseline" date and a "planned" date are shown in your data source, use the "planned" date. Use format: MM/DD/YY.

16. FAA PROG MGR (PROGMGRLST Character 14):
(PROGMGRFST Character 8):
(PROGMGROFF Character 8):
(PROGMGRTEL Character 12):

First name, last name, office symbol, and telephone number of the individual in the Program Manager's office who is most knowledgeable about the training requirements of the project. For first name, use nickname if appropriate. For telephone number use seven digits.

17. CONTRACTING OFFICER (CONTOFFLST Character 14):
(CONTOFFFST Character 8):
(CONTOFFOFF Character 8):
(CONTOFFTEL Character 12):

First name, last name, and telephone number of the FAA Contracting Officer responsible for the project. For first name, use nickname if appropriate. For telephone number use seven digits.

18. SEIC PROG MGR (MMPRJMGLST Character 14):
(MMPRJMGFST Character 8):
(MMPRJMGTEL Character 8):

First name, last name, and telephone number of the individual in Project Management who is most knowledgeable of the project. Usually there will be someone assigned. For first name, use nickname if appropriate. For telephone number use seven digits.

19. ACAD. TNG. MGR. (COTR) AF (AFCOTRLST Character 14):
(AFCOTRFST Character 8):
(AFCOTRTEL Character 12):

First name, last name, and FTS telephone number of the AF Training Manager or Contracting Officer's Technical Representative (COTR) at the Academy, or his designated representative. If the AF Training Manager or COTR wants to do all of the interfacing with the SEIC, use his name. If he wants us to deal directly with someone he has assigned to handle the project, use that individual's name. If no AF Training COTR has been assigned and there is activity in the program which would be useful for an AF Training COTR or if decisions are being made which could be enhanced by an AF Training COTR, write a memo to this effect to management (SEIC Training Manager). The necessary action will be taken to coordinate this requirement with APT-300. For first name, use nickname if appropriate. Academy FTS number is 749-XXXX.

20. ACAD. TNG. MGR. (COTR) AT (ATCOTRLST Character 14):
(ATCOTRFST Character 8):
(ATCOTRTEL Character 12):

First name, last name, and FTS telephone number of the AT Training Manager or Contracting Officer's Technical Representative at the Academy or his designated representative. If the AT Training Manager or COTR wants to do all of the interfacing with the SEIC, use his name. If he wants us to deal directly with someone he has assigned to handle the project, use that individual's name. If no AT Training COTR has been assigned and there is activity in the program which would be useful for an AT Training COTR or if decisions are being made which could be enhanced by an AT Training COTR, write a memo to this effect to management (SEIC Training Manager). The necessary action will be taken to coordinate this requirement with APT-300. For first name, use nickname if appropriate. Academy FTS number is 749-XXXX.

21. PROJECT CONTRACTOR (PROJ_CONTR Character 30):

The name of the company responsible for the development and production of the system. If there is a subcontractor for training, there will usually be someone within the prime contractor's organization who is responsible for training development/presentation. Use the name of the prime contractor unless he wants us to interface directly with a sub. If there are multiple contractors for a project and each is responsible for development of training for his portion of the system, consider development of two training data base records since there will probably be two distinct training programs. If a subcontractor is developing training for the project, include the name of the subcontractor in this section along with the prime contractor.

22. CONTRACTOR TRAINING REP (TNGREPLAST Character 14):
(TNGREPFST Character 8):
(TNGREPTEL Character 20):

First name, last name, and ten digit telephone number of the training contact in the project contractors organization. For first name, use nickname if appropriate. Include extension number with telephone number if required. Format: XXX-XXX-XXXX ext XXXX

23. # OF SITES IMPACTED (NUMOFSITES Numeric 4):

The number of operational sites which will receive equipment produced by the project. This number can be found in the System Specification, Brown Book, Document-Project Resume, and RFP. Numbers in each of these documents may conflict. Use the RFP first, if available. If there is no RFP, use the System Spec. If there is no System Spec, use the Document-Project Resume. If the Document-Project Resume does not indicate how many sites are impacted, use the Brown Book. If the Brown Book does not reflect the number of sites, talk to the Project Manager and anyone else who knows something about the system and make a guess. This number does not necessarily reflect the number of sites which have a training impact. For example, VORTAC could be installed at several sites which are supported by one manned site. In this case, the number in this field will not reflect how many sites there are which have a training impact. The number of sites which have a training impact is a more detailed level of information which will be defined in the subsystem training plan. This number should be further defined when more exact information becomes available.

24. # OF SYSTEMS PROCURED (NUMOFSYS Numeric 4):

The number of systems which will flow off of the assembly line. If systems being procured have sub elements which are so different that they require distinct training programs, consider developing multiple training data base records. Again, the number of systems being procured does not directly relate to how many personnel are to be trained but it does provide insight as to the magnitude of the project. Included in this number are systems procured for the Tech Center, Academy, and other non-operational sites. Analysis of this number will tend to clarify when the Academy will assume training, when a training capability may exist at the Tech Center, and many other items which will assist in training plan development.

25. FIRST INSTALLATION LOCATION (FSTINSTLOC Character 20):

The first operational site which will receive the system. Do not enter the Academy or Tech Center in this field (unless they are considered an operational site for the project). This location can be found in the RFP. Sometimes the System Spec will have this location but more than likely sites will be listed in the system spec unprioritized. The Program Manager's equipment delivery schedule is also a potential source of information for this field. Identification of the first site leads to identification of the deployment schedule which is essential for training plan development. An entry in this field indicates that we have some idea as to the deployment schedule.

26. DATE (FSTINSDATE Date 8):

Date of the first installation at an operational site. Use the date which reflects when the system is physically installed. You will find dates which indicate when installation starts, when the system becomes operational and many other milestones concerning installation but we can't put them all on the training data base record. Keep them in your detailed notes. They will be useful in developing the subsystem training plan. If the dates are fuzzy, enter your best guess, then further define it when more exact information becomes available.

27. TEST LOCATION (TEST_LOC Character 20):

Where the integration and test will be conducted. Many projects are being tested and integrated at the Technical Center. Others will be integrated and tested at selected operational sites. Understanding where the testing takes place will drive out training requirements and, possibly, training locations.

28. START (TEST_START Date 8):

When the test effort starts. Use the date which reflects when the system is installed at the test location (usually the Tech Center) even if you are told that actual testing will not start right away. Usually, if a system is installed, people will need to be trained on it no matter when the testing actually starts. This is another key milestone for training planning.

29. COMPL (TEST_COMPL Date 8):

When the test effort is scheduled to be completed. This date provides an indication as to utilization of the system at the Test Location (Tech Center), and can be used to help plan for hands on training availability (Note: Hands on training at the Technical Center for field personnel is not the norm). If date is not available, make a guess, then further define it when more exact information becomes available.

30. LAST SITE COMMISSIONED (LASTSITE Date 8):

When the last site receiving equipment produced by the project will be commissioned. This date reflects when the initial cadre of personnel at all of the affected sites must be trained.

31. DATE EQUIP DELIVERED TO ACADEMY (DELTOACAD Date 8):

Use the date when the equipment installation starts. Personnel may require training to monitor installation. The date you will usually find is the delivery date. Be advised that equipment may be delivered and sit in a warehouse for a while before installation starts. In any case, use the best date you can come up with. Use "planned" date vs "milestone" date when both are shown on your data base.

32. TURNKEY DAYS (TURNKEY Numeric 3):

The number of days between system delivery and acceptance. This information applies not only to the Academy but, usually, to all sites where the system is being installed. Gives an indication of system complexity and is useful when scheduling training classes.

33. AF TPR ACAD (AF_NO_ACAD Numeric 3):

The number of AF personnel at the Academy who need to be trained on the system. If they require several courses to be completely trained it will not be reflected here. For example, if six Academy instructors each have to attend three courses to learn the system, the number reflected here will be six. This number can sometimes be found in the ASM Training Proposal. The AF Training COTR can provide a clue as to how many people need to be trained. ASM can also provide guesses if it is not in the Training Proposal. In any case, this number should reflect our best guess if no hard number is available.

34. TC (AF_NO_TC Numeric 3):

The number of AF personnel at the Technical Center who need to be trained on the system. If they require several courses to be trained, it will not be reflected here. This number can be obtained by discussing the training requirements for the test effort with the SEIC/FAATC Training Rep or the Program Managers. Enter your best guess, then further define it when more exact information becomes available.

35. FIELD (AF_NO_FLD Numeric 5):

The number of AF personnel in the operational environment, at the depot, plus management personnel not at the Academy or Technical Center who need to be trained on the system. If they require several courses to be trained, it will not be reflected here. Get this number from the Training Proposals and discussions with ASM. Compile a guess if no one is sure, then further define it when more exact information becomes available.

36. TOT (AF_NO_TOT Numeric 5):

The total number of AF personnel who need to be trained to field the system. This number does not take into account attrition during deployment or training on the system for new personnel entering the work force who are not part of the initial cadres for each site. This is the total of the above three fields.

37. AT TPR ACAD (AT_NO_ACAD Numeric 3):

The number of AT personnel at the Academy who need to be trained on the system. If they require several courses to be completely trained it will not be reflected here. For example, if six Academy instructors each have to attend three courses to learn the system, the number reflected here will be six. This number can sometimes be found in the AAT Training Proposal. The AT

Training COTR can provide a clue as to how many need to be trained. AAT can also provide guesses if it is not in the Training Proposals. In any case, this number should reflect our best guess if no hard number is available.

38. TC (AT_NO_TC Numeric 3):

The number of AT personnel at the Technical Center who need to be trained on the system. If they require several courses to be trained, it will not be reflected here. This number can be obtained by discussing the training requirements for the test effort with the SEIC/FAATC Training Rep or the Program Manager. Enter your best guess, then further define it when more exact information becomes available.

39. FIELD (AT_NO_FLD Numeric 5):

The number of AT personnel in the operational environment plus management personnel not at the Academy or Technical Center who need to be trained on the system. If they require several courses to be trained, it will not be reflected here. Get this number from the Training Proposals and discussions with AAT. Compile a guess if no one is sure, then further define it when more exact information becomes available.

40. TOT (AT_NO_TOT Numeric 5):

The total number of AT personnel who need to be trained to field the system. This number does not take into account attrition during deployment or training on the system for new personnel entering the work force who are not part of the initial cadres for each site. This is the total of the above three fields.

41. NO OF CONTRACTOR COURSES (NO_COURSES Numeric 2):

The total number of AF and AT courses which the contractor will teach. The RFP is the best source of this information. If there is no RFP, see the Training Procurement Request. If there is no Training Procurement Request, see Training Proposals (AT & AF). If none of these documents exist, discuss with APT, AAT, ASM and make a guess, then further define it when more exact information becomes available.

42. CLASSES (NO_CLASSES Numeric 3):

The total number of classes in all of the courses which the contractor will teach. Derive as above for number of courses.

43. CONTR TPR (CNTRTOT Numeric 4):

The total number of personnel the contractor will train. The purpose of this block is to define the training workload of the contractor. We want to know how many students will graduate from his classes. If he teaches two courses to the same ten students, the number here will be 20.

44. CONTRACTOR TRAINING STARTS (TNG_START Date 8):

When the first class of the first course that the contractor is to conduct will start.

45. ENDS (TNG_COMPL Date 8):

When the last class of the last course that the contractor is to conduct will end.

46. LOCATION OF CONTRACTOR CLASSROOM TRAINING (CR_TNG_LOC Character 20):

Where the contractor will physically present the classroom portion of the training program. If the classroom training turns out to be CBI as in the MLS program, use the location where the student will be administered the CBI (Enter "(CBI)" after the location). Use the geographic location if possible. If the contractor has not been selected and the training is to be done in the contractor's facility, enter "CONTRACTOR FAC". Look in the RFP, Training Procurement Request, or discuss with APT-300. Make a guess based on the nature of the training program which needs to be developed, until more defined information becomes available.

47. LOCATION OF CONTRACTOR HANDS ON TRAINING (HO_TNG_LOC Character 20):

Where the contractor will physically present the hands on portion of the training program. Use the geographic location if possible. If the contractor has not been selected and the training is to be done in the contractor's facility, enter "CONTRACTOR FAC". Look in the RFP, Training Procurement Request, or discuss with APT-300. Make a guess based on the nature of the training program which needs to be developed, until more defined information becomes available.

48. AF JTA? (JTA_AF Character 3):

Yes or No, to indicate whether an AF Job Task Analysis is to be delivered. See RFP and Training Procurement Request.

49. DATE (JTAAF_DATE Date 8):

If applicable, list the date that the AF Job Task Analysis is scheduled to be/has been delivered to the FAA by the contractor.

50. AT JTA? (JTA_AT Character 3):

Yes or No, to indicate whether an AT Job Task Analysis is to be delivered. See RFP and Training Procurement Request. Keep in mind that the people writing the acquisition documents are AF-oriented. Before completing this field, make sure that the RFP actually covers AT Job Task Analysis.

51. DATE (JTAAT_DATE Date 8):

If applicable, list the date the AT Job Task Analysis is scheduled to be/has been delivered to the FAA by the contractor.

52. AF CTP? (AF_CTP Character 3):

Yes or No, to indicate whether the contractor will deliver a draft AF Contract Training Plan.

53. DATE (AF_CTP_DUE Date 8):

Date the contractor is scheduled to deliver the draft Contract Training Plan. (On older contracts, this item was called "Training Development Plan".)

54. AT CTP? (AT_CTP Character 3):

Yes or No, to indicate whether the contractor will deliver a draft AT Contract Training Plan.

55. DATE (AT_CTP_DUE Date 8):

Date the contractor is scheduled to deliver the Draft Contract Training Plan. (Previously called "Training Development Plan").

56. AF CBI? (CBIDEVCNTR Character 3):

Yes or No, to indicate whether AF Computer Based Instruction will be developed. See the RFP and Training Procurement Request.

57. DATE (CBI_AVAL Date 8):

Date the AF Computer Based Instruction Course will be available.

58. AT CBI? (CBIDVACAT Character 3):

Yes or No, to indicate whether AT Computer Based Instruction will be developed. See the RFP and Training Procurement Request.

59. DATE (CBI_AVALAT Date 8):

Date when the AT Computer Based Instruction Course will be available.

60. IS A PROPOSED TRAINING SCHEDULE IN THE TBD? (TDB_SCHED Character 3):

Yes - Means the Training Data Base contains a class schedule.

No - Means there's no schedule yet, but the Training Manager plans to submit one.

N/A - There will be no training of FAA personnel, so the SEIC Training Manager will not put a proposed schedule into the Training Data Base.

61. DATE AF TRAINING IS ASSUMED BY THE FAA (FOTNGSTART Date 8):

Date when the Academy first assumes the training of AF personnel on the system. Details as to what specific training this date refers to will be

provided in the subsystem training plan for the project. Discuss with APT-300 and make a guess. The subsystem training plan should explain exactly how the transition from contractor to Academy training takes place.

62. DATE AT TRAINING IS ASSUMED BY THE FAA (FOTNGSTRAT Date 8):

Date when the Academy first assumes the training of AT personnel on the system. Details as to what specific training this date refers to will be provided in the subsystem training plan for the project. Discuss with APT-300 and make a guess. The subsystem training plan should explain exactly how the transition from contractor to Academy training takes place.

63. METHOD - - AF (FO_METHOD Character 20):

The follow-on method of training AF personnel for the life cycle of the system. Normally, training for the initial cadre will be accomplished differently than it will be for all of those who follow. For example, all initial cadre personnel may be trained by the project contractor whereas all new employees may be required to learn the system on OJT. Use: CR (Classroom), OJT (On-the-Job-Training), CBI (Computer Based Instruction), HO (Hands-On), DS (Directed Study), in any combination.

64. METHOD - - AT (FO_METH_AT Character 20):

The follow-on method of training AF personnel for the life cycle of the system. Normally, training for the initial cadre will be accomplished differently than it will be for all of those who follow. For example, all initial cadre personnel may be trained by the project contractor whereas all new employees may be required to learn the system on OJT. Use: CR (Classroom), OJT (On-the-Job-Training), CBI (Computer Based Instruction), HO (Hands-On), DS (Directed Study), in any combination.

65. SYSTEM PRINCIPLES EXAM # (PRINCEXMNO Character 4):

The number of the AF system principles examination (also known as the theory of operations examinations, course equivalency examination, concepts examination, or bypass examination). This exam is sometimes prepared by the project contractor in conjunction with development of the initial training program. It is used in the field to demonstrate knowledge of the system and is used instead of attendance in formal training. Check with APT-300.

66. DATE AVAIL (PRINCAVLDT Date 8):

Date that the above examination will be available in the field. This date is significant in that it is part of the certification process. To become certified without attending formal training requires that the technician pass the system principles exam.

67. PERFORMANCE EXAMINATION # (PERFEXNUM Character 4):

This examination also has certification implications. Once a technician successfully completes formal training or passes the system principles examination he demonstrates that he can actually accomplish the certifiable

task by taking a performance exam before a technician who has been designated to administer the exam. APT-300 assigns the number.

68. DATE AVAIL (PERFAVDATE Date 8):

Date that the above examination will be available in the field.

69. TRAINING CONCEPT (TNGCONCEPT Memo):

This is a free-form block to amplify any of the information above and/or to explain the overall training concept. Please limit text to ten typed lines. Start this block by spelling out the full name of the project. i.e. for MLS (1st Buy), this block should start out: MICROWAVE LANDING SYSTEM, FIRST PROCUREMENT. . . . . In addition, reference to applicable related training with other subsystems should be identified: eg "See records XXX and XXX for related training". This entry should be made at the end of all other data in the element.

*(Asterisk, placed next to the record number)

This indicates a project that may not have a training requirement at this time. However the project is being monitored for training requirements. If/when a training requirement is identified the asterisk will be removed and project training planning will be intensified.

APPENDIX D

SUBSYSTEM TRAINING PLANS (STPs)

Subsystem Training Plans for all of the NAS Plan programs which have a training requirement are under development or revision at this time. They form a major part of this NAS Training Plan and serve as the source of the data contained in the Training Data Base. The intent is to include all these plans as a part of the NAS Training Plan in this Appendix; to date 73 of these STPs have been delivered to the field.

The present plan for distribution calls for SEIC to deliver new and/or revised STPs directly to Regional offices I.A.W. each Region's established requirements. Appropriate FAA HQ distribution will also be made. All new and/or revised STPs now undergo a thorough review and edit cycle prior to release. Included in the cycle are the following offices: ASM-210, AAT-14, APT-300, AAC-910, AAC-930, AAC-940, FAA Program Manager, and the SEIC Program Manager.

Indexed on the following pages is a summary of all STPs which have been distributed to date. The date that each STP was originally completed and the date/revision number of the most current STPs are shown as applicable.

As new STPs are delivered, they are added to the list and identified there as <u>new</u> material. Also, new revisions to already-distributed STPs sent to the field are identified on the same list as <u>revised</u> material.

APPENDIX D

SUBSYSTEM TRAINING PLANS (STPs)

NAS PLAN PROGRAM #	PROJECT NAME	COMPLETION DATE	REVISION # (DATE)	NEW/REVISED SINCE 4/88
1-02	FDIO (ARTCC)	08/30/85	3 03/12/86	
1-02	FDIO (ATCT)	08/30/85	3 03/12/86	
1-03	DARC ENHANCEMENTS (I)	08/30/85	0 / /	
1-03	DARC ENHANCEMENTS (II)	01/31/86	0 / /	
1-04	EARTS ENHANCE (MOSAIC)	07/31/85	0 / /	
1-04	EARTS MOSAIC (MSAW/CA)	07/31/85	1 04/30/87	
1-05	ODAPS	08/31/85	1 11/10/86	
1-06	TMS UPGRADE (PHASE II)	07/31/85	1 05/01/87	
1-07	HOST	11/27/85	0 / /	
1-08	EN ROUTE METERING	02/28/86	0 / /	
1-09	CRA	01/31/86	0 / /	
1-10	MODE C	01/31/86	0 / /	
1-11	VSCS	07/12/85	7 04/03/86	
*1-12	AAS (Phase I-ISSS)	07/31/86	0 / /	
*1-12	AAS (Phase II-TAAS)	11/30/86	0 / /	
*1-12	AAS (Phase III-TCCC)	01/31/87	0 / /	
*1-12	AAS (Phase IV-ACCC)	03/31/87	0 / /	
1-16	OFDPS	02/28/86	1 04/30/87	
2-01	ARTS-III (ETCA)	01/31/87	1 05/01/87	
2-03	ETG DISPLAY (ARTS III)	01/31/86	0 / /	
2-06	ARTS IIA ENHANCEMENTS	09/30/85	1 11/10/87	REVISED
2-07	ARTS II DISPLAY	11/30/85	0 / /	
2-11	MULTI CHANN VOICE RECRD	10/31/86	2 02/15/88	REVISED
2-11	REPLACE REC (400 CHAN)	10/31/86	0 / /	
2-16	BRITE DISPLAYS	08/30/85	3 11/01/87	REVISED
2-18	SUSTAIN N.Y. TRACON	01/31/86	1 05/01/87	
3-01	FSAS (MODEL #2)	05/09/86	1 11/10/86	
3-03	CONSOLIDATED NOTAM	03/31/86	0 / /	
3-04	WMSCR	09/18/85	3 04/27/87	
3-05	WCP	06/30/86	1 04/28/87	
3-07	EFAS	04/28/86	1 11/10/86	
3-09	AWOS (AMEX CONTRACT)	02/07/86	0 / /	
3-09	AWOS (COMPETITIVE)	04/24/86	0 / /	
3-10	RRWDS	11/08/85	0 / /	
3-11	GOES RECORDERS	11/08/85	0 / /	
3-12	LLWAS	08/30/85	0 / /	
3-13	ICSS (TYPE I)	10/15/85	3 03/15/88	REVISED
3-13	ICSS (TYPE II)	10/15/85	3 03/15/88	REVISED
3-13	ICSS (TYPE III)	10/15/85	3 03/15/88	REVISED

* Those STPs marked with an asterisk have been developed but are given limited distribution due to their nature. They are all in the Advanced Automation System series.

APPENDIX D

SUBSYSTEM TRAINING PLANS (STPs)

NAS PLAN PROGRAM #	PROJECT NAME	COMPLETION DATE	REVISION # (DATE)	NEW/REVISED SINCE 4/88
4-03	DOPPLER VOR	12/19/86	1 05/01/87	
4-03	VORTAC (2ND GENERATION)	06/30/86	1 11/10/86	
4-04	NDB	11/19/85	3 05/04/87	
4-05	GPS MONITORS	09/15/87	0 / /	
4-06	ARMS (ILS)	01/31/86	1 09/15/87	
4-07	MLS (1ST BUY)	11/30/85	1 08/24/87	
4-07	MLS (2ND BUY)	04/25/86	1 10/13/86	
4-08	RVR ESTABLISH/UPGRADE	11/30/85	1 08/27/87	
4-09	VISUAL NAVAIDS (PAPI)	01/31/86	0 / /	
4-09	VISUAL NAVAIDS (REIL)	12/20/85	0 / /	
4-09	VISUAL NAVAIDS (RRCS)	02/23/86	0 / /	
4-10	APP LIGHT SYS (ALSF-2)	03/30/86	0 / /	
4-10	VISUAL NAVAIDS (MALSR)	01/31/86	1 04/25/86	
4-11	DF MODERNIZATION	11/20/85	0 / /	
4-12	MODE S/DATA LINK	11/05/85	1 11/10/86	
4-13	ASR-9	01/31/86	2 02/27/86	
4-13	LEAPFROG - ASR-7	09/30/86	1 05/01/87	
4-13	LEAPFROG - ASR-8	07/31/86	1 11/10/86	
4-14	ASDE-3	07/31/85	1 05/01/87	
4-15	LONG RANGE RADAR (FARR)	12/02/85	0 / /	
4-15	LONG RANGE RADAR (TUBE)	12/16/85	1 04/13/87	
4-16	NEXRAD	07/31/86	1 11/10/86	
4-17	LORAN-C	03/31/86	1 09/15/87	
4-18	TERMINAL DOPL RDR	11/12/86	0 / /	
5-02	DATA MULTIPLEXING	10/31/85	4 05/13/88	REVISED
5-03	RML SYSTEM (RCL)	07/12/85	5 12/04/87	REVISED
5-05	AIRPORT TELECOMM	09/30/86	1 05/01/87	
5-07	NADIN II	02/20/86	3 10/17/86	
5-08	RCE	03/31/86	1 05/01/87	
5-09	M28 TTY-R	07/31/85	0 / /	
6-01	MDT	03/16/88	0 / /	NEW
6-01	MPS (TANDEM TXP) AUGMENT.	11/06/86	0 / /	
6-01	RMMS (CORE)	05/29/86	1 03/30/87	
6-02	CBI	09/30/86	1 05/01/87	
6-04	MCCP/MMC	03/31/87	1 09/15/87	
6-07	POWER SYSTEMS	04/25/86	0 / /	
6-14	NAT RADIO COMM SYSTEM	02/20/86	1 10/01/87	
6-16	GENERAL SUPPORT (CAEG)	01/31/86	1 09/15/87	